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NATURALIST;

A POPULAR MONTHLY MAGAZINE,

ILLUSTRATIVE OF THE

ANIMAL, VEGETABLE, AND MINERAL KINGDOMS.

CONDUCTED BY

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NOTES ON THE BIRDS OF IONA.

BY HENRY D. GRAHAM, ESQ.

(Continued from Vol. II., page 214.

The Rock Dove, (*Columba livia.*)

The Wood Pigeon is unknown upon our rocky woodless shores, but its absence is compensated for by great numbers of a smaller species—the Rock Dove.

The granite cliffs on the south of Mull, the basaltic crags of Staffa, and lofty precipices of trap rock upon the adjacent islands, are all perforated by innumerable caverns of every imaginable size and shape; from the well-known majestic hall of Fingal, resounding with the sullen booming of ever rolling waves, down to the little fairy grotto, whose cool white shell-sand is scarce dimpled by the sparkling ripples of the sheltered sea. Some of these caves are grand, and of lofty dimensions, with no floor but the deep blue water which heaves to and fro through their huge frowning portals; others are romantic and picturesque, their rocks covered with many-coloured lichens, and their dark apertures fringed with shaggy heather and ivy, amongst which is browsing a wild mountain goat, with huge horns and beard. But many more of these caverns are horribly gloomy and forbidding—deep black dens extending far beyond the reach of the light of day, stretching into the very bowels of the adamantine cliff: the air smells dank and foul, and the walls are dripping with unwholesome slime. It is dangerous to explore them further without striking a light, as you may meet deep holes and black pools of water; and it is not unlikely but you may see the twinkling eyes of an Otter peeping out through the gloom. These caves generally have legends attached to them, such as of fugitive clansmen hiding from the pursuit of the avenger of blood, of wholesale deeds of murder, or of wild scenes of diablerie; and the names of the *Cave of Death*, the *Pit of Slaughter*, and the *Hobgoblin's Den* are often met with, and human bones actually are often discovered in them.

These haunts of by-gone murderers, smugglers, and outlaws, are now only tenanted by Doves, the emblem of innocence. They may be seen perpetually flitting in and out, some parties going off to feed, others returning to rest; a few birds sitting about the entrance, pluming themselves in the sunshine, or quietly dozing upon a sheltered ledge of rock. Upon a near approach, the cooing of the old birds may be heard, together with the querulous *peep-peeping* of the young demanding food, and the occasional stir of wings; but

upon any alarm being given, the voices are immediately silenced, the clang and whir of wings reverberate from the profundity of the cave, and out pours a long stream of snowy bosoms and silver wings, which swiftly skim along the surface of the sea, and disappear round the next headland. In Iona alone (though but a small island, we have as many as nine or ten caves frequented by Pigeons, and in nearly every island of the Hebrides, there is sure to be one cave called *par excellence*, "Ua' Caloman," the Pigeon Cave.

I believe this Dove is only found upon the coast, though I am not aware what attraction the sea-shore has for it; certainly, with us, it exclusively inhabits the sea-caves, and never goes far inland. In the winter I have once or twice seen them sitting upon the rocks at low water, but I hardly think they were looking for food. They feed upon land snails—some small species which at certain times is found in considerable variety and vast abundance, spread over the low sandy pastures which skirt the sea. The stubbles, the newly-sown fields, and the stack-yards, are their principal resorts for food, and their crops are invariably to be found well distended with grain, though in winter it is difficult to account for their getting such good supplies, after the stubbles are picked clean, and the stack-yards cleared. They must sometimes go great distances for their daily food; those which inhabit the small islands must of course always come to the mainland for their supply of grain —some a great distance. When a large flock is suddenly raised while feeding in a corn-field, after wheeling up in the air, it breaks up into smaller parties, which dart off in various directions for their homes; some across the seas, others to the nearer caves.

They seem to be migratory, to a certain extent in quest of food, at seed-time and harvest, if, as is often the case, the island crops are a little earlier than those on the mainland; then our fields are covered with those petty plunderers, and at night the caves are filled with roosting birds, which remain about the island as long as food is very plentiful, and then decamp. I think, however, that individual birds are a good deal in the habit of frequenting the same localities, and roosting in the same cave until driven off by some cause; I have watched marked birds doing so, especially last summer, I was observing a large white male Pigeon, which had evidently escaped from the cote; he took to himself a little wild mate, and reared a brood in one of the caves. I made a duty of destroying his family, which was easily done, as they were marked birds; but he himself, though of such a conspicuous colour, always contrived to escape. He became very wary from being pursued, and I remarked that he always frequented the same cave, till he received a random shot, after which I lost sight of him for a considerable time; but I found him at last, located upon the other side of the island, where he remained till his death.

The Rock Dove's nest is made up of small sticks or heather, or dried sea-weed, and is lined with dried grass: the situation selected is any little ledge or cleft within the sheltering bosom of a rocky cavern. The eggs are

two in number, generally producing male and female birds. The time for commencing their nestling seems rather variable; this year I found some young ones already hatched, on the 2nd. of April, while other pairs were only erecting their nests. They have several broods in the year, and their eggs may be found unhatched as late as September.

It is rather a timid bird if often shot at, but is by no means a shy or wary bird: in the fields the feeding flocks may often be openly approached, or the most barefaced attempts at stalking them will succeed. In the breeding season the hen will sit on the nest till approached, and never deserts it though often disturbed, and her nest and eggs handled. She does not seek for inaccessible ledges to build her nest on, but takes any spot which offers, sometimes even the very floor of the cave. If her eggs are taken out she will probably replace them; and if her young are taken when half-fledged, she seems glad to get them so soon off her hands, and at once prepares for rearing her second brood. The young birds instantly become quite tame, and reconciled to hand feeding; indeed, as they grow up, their impertinent boldness becomes rather troublesome. They readily take to the Dovecote, and pair with the tame Pigeons; even with fancy breeds, such as Fantails, etc. If a pair of real wild ones breed in confinement, their progeny at once shew signs of diverging in colour from the natural uniform of their wild ancestry; the young birds are of a dark slate-colour in their first plumage, though they have the same markings as the adult birds. The male is recognised from his mate by a slight superiority of size, and more lustrous plumage.

In a gastronomic point of view, these Pigeons are one of the most valuable kind of birds which frequent our coasts; they are nearly always fat and in good condition, are numerous and always to be procured; besides, being fed constantly upon our barley and oats, one can feel no compunction in levying a tribute upon them in return.

They are easiest shot while feeding abroad in the fields; at the eaves a shout will cause them to fly out, but with such suddenness and swiftness, that it requires something of a Battersea Pigeon-shooter's knack to succeed in hitting them quick enough. An indifferent shot, (after knocking over one or two which may be incautiously napping upon the outer ledges,) had better conceal himself either in the cave or in a good position above it; in a short time a bird is sure to come darting swiftly for its accustomed haunts, but upon catching a glimpse of a lurking foe, he stops his rapid career, flutters his pinions for a moment, uncertain what to do; that momentary indecision is fatal—down he falls! while a roar of a volcano bellows along the vaulted roof, and the cave is filled with wreaths of sulphureous smoke.

Writing from Iona I must not conclude without reminding you of the name of our patron saint, St. Columba, the Dove that first brought to this land the olive branch of mercy.

Iona, May 1st., 1852.

(To be continued.)

A BOTANICAL SCRAMBLE ON HELVELLYN.—No. 2.

BY J. B. DAVIES, ESQ.

Botanists, I think, should always go out in pairs, were it for no other reason than to cheer each other under the hardships of a mountain climb, amid mist, rain, and wind; and not unfrequently they may lend a helping hand in surmounting some rude rock, or crossing a rapid stream. By dividing the ground, too, they are more likely to come upon the various objects of their search; and, unless actuated by a very unbotanist-like spirit, are of mutual advantage, exchanging the rarities which they individually come upon; in short, on a botanical ramble, as elsewhere, the old proverb holds good which says, "two heads are better than one." Fully convinced of this truth, Mr. Joseph J. Flintoft and myself saddled on our vasculums, and on one of the stillest evenings in the whole summer which is just preparing to leave us, marched forth for my old rendezvous at Wythburn. The eight miles were soon passed over, and next morning were quite forgotten in our anxiety to get up into the mountain. At half-past eight then, on a misty morning in the first week in August, we left the famous "Nag's Head," and by a Ghyll which descends just behind the chapel, commenced the ascent of Helvellyn.

The ordinary hill plants were in plenty by the mossy sides of the stream, though many were fast failing. Old age had touched the Bog Asphodel, (*Narthecium ossifragum*,) and made it as cross and brittle as could be; the stars of *Saxifraga stellaris* were getting dim: and the rich purple-blue of the Butterwort, (*Pinguicula vulgaris*,) had passed away, leaving a heavy-headed capsule in its stead. Passing these and others, let us up; for, about a hundred feet above us, I see something like a tuft of the Rose Root, (*Rhodiola rosea*,) sticking fast to an overhanging rock: it too has past into its seed-time, and, with a whorl of capsules, contrasts well with the two-beaked fruit of the Saxifrages, which form its next natural ally. We had already on many occasions picked the ordinary sub-alpine plants, and therefore spent little more time in the ascent than was necessary to carry us comfortably to the summit; merely staying now and then to admire the freaks of the fast-gathering mist. We had got near half-way up, and turned to survey the lovely scene beneath us, and raising our eyes for a moment to the rocky summit of the hill, again turned round to cast

"One longing, lingering look behind"

on the vale, the hills, the tarn, and streams, when what was our astonishment to find that in the space of scarcely two seconds they, and even the greater part of the hill on which we stood, had vanished from our side, and that a thick veil of mist was preparing to swallow up ourselves. This state of matters continued until long after we had reached the summit, near which we were amazed at seeing what appeared to be a herd of fine oxen, but

what turned out to be nothing more than a few mountain sheep. So great are the magnifying and distorting powers of the mist in this region, that it required all our faculties to resist the suspicion that we were in fairy land, and that these were the freaks of some mountain spirit.

The summit was gained, and instead of the gorgeous views which all climbers expect to be rewarded with, we beheld some ten feet square of ground, a pile of stones, our own bodies, and a majestic sea of mist. Turning eastward, we were within a few paces of the edge which nods down into the solemn Red Tarn, and what a terrible precipice it seemed! Even my companion, who knew every inch of the ground, and was well aware that far from being a perpendicular *fall*, the rocks could, though not without danger, be descended for six hundred feet, to the edge of the tarn, could not deny that the sight was one well calculated to inspire the gazer with a peculiar feeling of awe. We spent fully an hour with our faces in the direction of the tarn, without catching the slightest glimpse of it, till at length a faint silvery crescent appeared for a moment, and was again lost in a misty shroud: gradually, however, under the influence of a south breeze, the thin vapours flew away like affrighted spectres, and the quiet mountain lake lay before us, with the dreadful Stridding Edge walling it in on our right, and the equally appalling Swirrel Edge protecting it on our left, and ending in a conical hill, bearing the high-sounding name Catkhedecam—the high-crested.—

> "What lovely magnificence stretches around!
> Each sight how sublime! and how awful each sound!
> All hush'd and serene as a region of dreams,
> The mountains repose 'mid the roar of the streams,
> Their glens of deep umbrage by cataracts riven,
> But calm their blue tops in the beauty of Heaven."

Looking over Swirrel Edge, a glimpse of Kepple Cove Tarn is obtained; and over Stridding Edge, Eagle Crag, a famous botanical station, is seen. Gradually the sky brightened, and far in the east, two of the reaches of fair Ullswater became visible;

> "The calm blue lake, low whispering to the beach
> In tones more eloquent than mortal speech,"

and the green tops of Dunmellet, and half-planted Soulby Fell, were as plain as the rock beside us.

Thinking that we might now do so in safety, we began to descend by Swirrel Edge, coming now and then upon tufts of the rare *Carex rigida*, and the equally good *Juncus triglumis*. These we took in high glee, but we had a better than either in view: rumour had whispered that the Alpine Mouse-ear Chickweed, (*Cerastium alpinum*,) was to be found on these rocks, and a generous rivalry arose between us, striving which should get the first specimen, if it was to be got at all. At length the woolly leaves of our friend were discovered, and a shout of joy echoed from at least a dozen rocks. The patch was but small, had no flowers, and only one or two of the horn-like capsules, but with renewed vigour we continued our search, despite the rain,

which now bade fair for wetting us through, and patch after patch were found, some in flower, but more in fruit. The blue Saw-wort, (*Saussuria alpina*,) and delicate-leaved Alpine Meadow Rue, (*Thalictaum alpinum*,) the former in flower, and the latter in fine fruit, increased our joy, and made something like pleasure beam on our water-streaked faces. Continuing our scramble among huge masses of green stone towards Stridding Edge, we saw far above us large tufts of the Sea Thrift, (*Armeria maritima*,) at least three thousand feet above its ordinary habitat by the sea-shore.

We had both an *unexpressed* idea that this was by no means an unlikely spot for the *Saxifraga nivalis*, but fearing that our hopes were too sanguine, did not mention it. At last the secret *did* come out;—Mr. Flintoft was a little way above me on the rocks, searching for some more of the *Cerastium*, when I, imagining that a plant at his feet was different from the ordinary *S. stellaris*—we had never gathered *S. nivalis* before—and pointing it out, asked him what it was. "It is it," was his reply, suiting the answer to the question in his own mind. A little searching brought up some more, and we returned with a moderate supply of this valuable plant. The plant resembles the common *S. stellaris* in general appearance, but is stronger in habit, with rounded and more fleshy leaves, tapering into a foot-stalk, instead of wedge-shaped; the petals want the orange spots, and are tinted with pink externally. When the plant is once gathered in its native habitat, it will never be effaced from the memory.

Getting closer to Stridding Edge, we spent some time in looking for another rarity, *Saxifraga oppositifolia*, nor did we search in vain; true, its purple flowers glad the early spring, and, by the time most botanists commence the season, have passed away; the capsule was there, however, and, with the straggling stem and opposite thyme-shaped leaves, served to distinguish it at once. In the moist little masses of soil occurring in the corners of rocks, the little simple spikes and ovate leaves of the *Polygonum viviparum* were to be found; and on one or two spots we got a plant of *Salix herbacea*. This is a *Willow*, inhabiting the highest mountains, and so small that an ordinary sized hand will cover some dozens, many of the plants having only three or four leaves. which are smaller than those of the Blaeberry, (*Vaccinium Myrtillus*,) and not unlike them in shape; the catkin consists of from four to six capsules. It is not by any means so plentiful on Helvellyn as on the summit of Skiddaw, where, amid the loose gravelly pieces of clay-slate, whole forests are passed over at every step.

Having enumerated all the *rarities*, perhaps I had as well stop, but I think it will be pardoned if I say that our boxes received a few less rare, in addition to those found three weeks before at Grisedale Tarn, all of which, with the exception of the *Silene* and *Hieracium*, enriched our collection on this day. *Cystopteris fragilis* and *Lastræa oreopteris* hung in graceful tufts from the fissures of the rocks; *Festuca ovina*, *vivipara*, and *Triodia decumbens*, made up a considerable proportion of the herbage of the drier parts of the

hill. In the moist moss by the Ghyll sides, *Carex Œderi*, the round-leaved Sun-dew, (*Drosera rotundifolia*,) and the Danish Scurvy-grass, (*Cochlearia Danica*,) were plentiful; and in the stream itself, dense masses of *Montia fontana* put out their inconspicuous flowers.

Having satisfied ourselves with the good things above Red Tarn, thoughts of dry clothes and a comfortable meal presented themselves vividly to our minds, and as the only way of attaining these ends was to get down, we at once addressed ourselves to our descent. But first we had to *ascend*, and to save a long and tedious walk, boldly ventured on one of the worst parts of Stridding Edge, a huge rock, which, to an imaginative mind, presented the appearance of a mass of crystals of carbonate of soda, immensely magnified. We did get over them, and, spite of thick mist and drenching rain, made our way to the very stream by which we had ascended—thanks to my friend's knowledge of the country—and down.

By this time the mist began again to clear away, and gave us a glimpse of the range of hills known as Wythburn Head, with a fine Ghyll, which, in the words of Thomson,

> "Smooth to the brink a copious flood
> Rolls fair and placid; where collected all
> In one impetuous torrent, down the steep
> It thundering shouts, and shakes the country round."

So near, however, did the hills appear, and so unusually high, that we began to doubt if we had not got wrong by some chance or other. This was but a freak of the mist, as we learnt on descending a little further, and coming in view of the modest little church and the inn, to which with all speed we hastened, and reached about six in the evening, in time to enjoy a hearty meal, and a pleasant walk home. And was it for this that two happy little creatures left the quiet comforts of Keswick, and encountered so many dangers from precipitous rocks, uncertain mists, and drenching rain? Not altogether—the plants were rare, and as such we prized them; but we had another and a deeper source of enjoyment than the mere acquirement of so many rarities;—not a vapoury cloud; not a rugged rock or mountain torrent; not a sun-lit knoll or dark forbidding chasm; not a sound caused by passing wind, whether it be the whisperings 'mid the leaves of some patriarch of the forest, or the howling of the wildest storm, but speaks of power, wisdom, and goodness to the heart of the naturalist, who,

> "Exempt from public haunt,
> Finds tongues in trees, books in the running brooks,
> Sermons in stones, and good in everything."

Keswick, August 12th., 1852.

DISCOVERY OF EUFRAGIA (BARTSIA,) VISCOSA, IN SUSSEX.

BY THE REV. E. H. M. SLADEN.

In compliance with your request to me to embody the details of my discovery of *Eufragia viscosa*, (Grisebach,) *Bartsia viscosa*, (Smith,) I beg to say that on the 27th. of September, 1851, I met with it in a bye-road called Turkey lane, which, branching off the highway from Hastings to Lewes, at the hamlet of Sidley-green, leads to the village of Hooe. The exact spot is known by the name of Clinch Green, and will be found laid down in the Ordnance map as not quite two miles from the sea. The plant was growing on a piece of waste grass by the road-side for some little distance, and in considerable quantity; and here and there were patches of rushes, shewing the moisture of the soil. I made several visits to the spot afterwards, and observed the plant in flower as late as the 30th. of October. The largest specimen measured twenty-one inches and a half in height, and there were others nearly as tall.

During the present season I had not an opportunity of visiting the spot until the 11th. inst., when I was surprised at finding the plant as rare as it was plentiful last autumn. I counted only about half-a-dozen plants in all, and these were so insignificant that I much doubt whether I should have noticed them if I had not gone on purpose. The tallest specimen was not above a foot high. This difference is probably to be attributed to the long-continued drought which prevailed in the spring, for we had scarcely any rain from the middle of February to June, and the ponds were very generally dry; and earlier in the winter, before the drought set in, I heard it said that the ponds had not been known so low for a lengthened period.

I sent you the specimen of *Eufragia*, because I believed it was the first instance of its discovery in the neighbourhood; indeed, I imagine this must be its most eastern station in Great Britain. Mr. Watson, in the "Cybele Britannica," mentions Sussex among the twelve counties, (eight English and Welsh, and four Scotch,) in which it has been found; and of these Sussex is the only eastern one. The same author limits the range north and south by the parallels 50-57: Mr. Woods, in his "Tourist's Flora," gives south and west Europe generally.

Let me note here that among the plants most prominent in Turkey lane at this season at least, are *Solidago virgaurea*, *Pulicaria dysenterica*, *Hieracium sylvaticum*, *H. Eupatorium*, *Scabiosa succisa*, *Lycopus Europœus*, *Mentha aquatica*, *Galeopsis tetrahit*, *Erythræa centaurium*, *Ulex nanus*, with *Erica tetralix* and *Calluna vulgaris;* in places *Ranunculus Lingua* and *Flammula*, and rarely *Linum angustifolium*. The lane is a favourite with me, running a long distance with woods on either side; here I have seen the first Dormouse abroad, and the first spring flower, and here, last Tuesday, I saw the Hooded

Crow, or Saddle-back, as I have been accustomed to call it, fly across for the first time this season.

With reference to the Heaths which I have just mentioned, let me add that I have found *Erica cinerea* nowhere hereabouts, but on Bexhill Common, where it grows sparingly with the others. This appears to be something of a metropolis for the *Hypericaceæ*, as I have identified no less than five species in this village alone, namely *H. Androsæmum*, *quadrangulum*, *perforatum*, *humifusum*, and *pulchrum*, and there may be more. We rejoice in the possession of the Lent-Lily, (*Narcissus Pseudo-narcissus*,) and Sweet Brier, (*Rosa rubiginosa.*) There seem to be several varieties of the Rose, but I have never found time to study them. One sweet spring flower we sadly miss, and that is *Viola odorata*, which is scarcely to be found, except a few plants of the white variety.

Ninfield, near Battle, October 22*nd.*, 1852.

JOTTINGS OF A NATURALIST, AT KILLARNEY.

BY CUTHBERT COLLINGWOOD, ESQ., M. A.

The Lake country of Ireland abounds with interest, even to the mere pleasure-seeker who leaves his home solely in search of novelty; and if, with this itch for travelling, he combines an admiration of the wild and unmutilated beauties of natural scenery, his enjoyment is proportionately increased. The artist here finds nature in her most varied garb, at the same time gay and grand, gentle and majestic; here lake and mountain, glen and waterfall, combine to afford such lavish and worthy employment for his pencil, that it is to me a matter of some astonishment that this district is not more frequented by these high-priests of nature. Or, if the traveller be versed in folk-lore, Killarney is verily enchanted ground; perhaps no equal portion of Great Britain is so rich in fairy legends and popular superstitions as are these far-famed lakes—every islet on whose bosom, and every spot on whose lovely banks, its own marvellous tale invests with an especial interest. If he is fortunate enough to secure an intelligent guide, his stock of such legends, however large, will undoubtedly be increased; and the sturdy boatman that pulls him over Lough Lene, will tell him with true Irish earnestness, that, with his own eyes, he has seen the great and good O' Donaghue cross those smooth waters on his silver-shod steed.

But it is not my purpose to enter upon subjects such as these, which, however interesting, would be out of place here; but conceiving that a few remarks on the more striking features of the Flora, etc., of the district, might possibly be interesting, the following hasty notes were written, as I glanced over them simply as accessories to the full enjoyment of a visit to the lakes.

One of the first things which strikes the observer is the luxuriant and verdant clothing of the mountains. From the very edge of the lake, and

rising to a height of several hundred feet, are forests of Oak, Pine, Ash, Beech, and Whitethorn, plentifully sprinkled with Hazel, Alder, Holly, and Arbutus; the great variety of the shades of green produced by these denizens of the forest, forming a singularly beautiful ensemble. The last-mentioned tree, the Strawberry tree, (*Arbutus unedo,*) grows in great abundance in spots where no other tree would find sufficient soil to nourish it, and is here truly indigenous, at least, so say some botanists; but opinion is divided, and 'adhuc sub judice lis est.' It is a very handsome and ornamental tree, and at the commencement of winter, its evergreen boughs may be seen bearing fruit and blossoms upon the same tree.

It sometimes attains a large size, and an individual is pointed out to visitors on Dinis Island, which is said to be the largest in Great Britain, and whose trunk measures seven feet in circumference. The whole tree is astringent, and, according to Pliny, it obtained the name *Unedo* from *una* and *edo,* because one berry is a sufficient dose. Its wood is very beautiful, and small articles made from it and from the curious Bog Oak, so frequent among the Irish peat soil, form the staple commodities of the peasantry. The Holly, also, (*Ilex aquifolium,*) here attains a great size, and the Yew, (*Taxus baccata,*) may be here mentioned as forming no inconspicuous part of the Killarney woods. A gigantic specimen grows in the centre of the cloisters of the beautiful abbey of Muckross, whose aged arms entirely fill the quadrangle, and concerning whose antiquity the abbey-keeper, a Berkshire man, asserts that authentic records extend back for a period of four hundred years.

Directing our attention now to the more humble and delicate members of the vegetable kingdom, I may remark that in the savagely romantic Gap of Dunloe, the plant which first claims the notice, even of cockney visitors, no less from the familiar appearance of its delicate petals, than from its great profusion, is that cosmopolitan little saxifrage, London Pride, (*Saxifraga umbrosa.*) Thus the same plant which rears its head in that spot where nature shows herself most grand and majestic—where she appears *unveiled,* if I may be allowed the expression, is again met with in the attic windows of our smoky metropolis, whence she is banished, and where this little flower is sometimes her only representative.

A less common and more characteristic plant, however, is the handsome Butterwort, (*Pinguicula grandiflora,*) whose large purple flowers attract the attention of the most careless observer. Its existence, I believe, is confined to this part of Britain. The common, but nevertheless beautiful, Foxglove or Fairy-fingers, *Lusmore* of the Irish, (*Digitalis purpurea,*) although widely distributed over the British Isles, deserves mention here as the especial favourite of the good folks, those Irish Eumenides, whose head quarters are here, and whose vengeance I should almost fear to draw down upon me, were I to omit so essential an element of the fairy land of Killarney. There are few parts of this district in which the air is not loaded with the odours

of the Sweet Gale or Bog Myrtle, (*Myrica Gale,*) the soil being in general especially fitted for its propagation.

But the botanical feature of Killarney is the abundant growth of the Royal or Flowering Fern, (*Osmunda regalis,*) whose peculiar and delicate green everywhere fringes the lakes. It grows in the utmost profusion and luxuriance, rearing its beautiful fronds and sori in every direction, and even forming a distinctive feature in the foreground. It affects damp and watery places, and in gullies and the beds of brooks its fronds attain a surprising magnitude. While speaking of Ferns, I must not omit to refer to the Hare's-foot Fern, (*Trichomanes speciosum,*) whose habitat is near the beautiful Tore waterfall. This delicate little plant is peculiar to Ireland, and, except in one or two other spots in the Green Isle, no specimen of it has been found in Great Britain. In Newman's "British Ferns," full directions are given to the explorer as to the exact locality of its growth, but as I had not that complicated path by heart, I was fain to ask a guide to point it out to me. "Arrah then," said the cunning fellow, "sure and it's only one sowl of us knows where ye'll find the raal Fern, but if yer honour'll pay the piper, sure he'll fetch yer honour a bit."

Ross Island is well worth a visit. It is laid out as a beautiful garden—a most delightful retreat—where the soft smooth turf, innumerable flowers, shrubs, and trees vie with one another in rendering it enchanting. On one of the grass-plots is an object of especial interest. It is a large boulder, about sixty cubic feet of stone, as near as I can recollect, of a material perfectly different from anything else that exists in the island, and which can only be referred to the mountains on the other side of the lake, two or three miles distant. There was a celebrated copper mine on this island, which commenced working in 1804, and was so rich, that in four years eighty thousand pounds worth of copper was extracted, but unfortunately at the end of that time the water found its way in, and so effectually stopped all further proceedings, that it has never been worked since. The debris only is now seen, from which small pieces of copper ore of great beauty are ferreted out by men, who offer them for sale for a trifle to passers by, but which tell a plain tale of the richness of the vein.

With a moderate degree of good fortune, the visitor will not be many days at Killarney without seeing an Eagle soaring in his native air, an object so interesting to an English naturalist. I had the luck to see him more than once, although not under circumstances which sustained the opinion I had of his valour. Two or three Mallards had just flown over my head, and when they had passed some little distance, I perceived that an Eagle was among them; but they were evidently annoying him, flying round and round him, and harassing him, as small birds do an Owl when they get him into daylight. But, nevertheless, in this country the Eagle ranges free and uncontrolled; and a picturesque rock rising one thousand one hundred feet from the lake, is still known as the Eagle's Nest, and is still pointed out as the eyrie of the

king of birds, where, for hundreds of years, generation after generation of them has dwelt and still dwells securely, out of the reach of the most daring of their human enemies.

When upon the rugged crest of Mangerton, two thousand seven hundred feet high, I hoped to have found some alpine plants, but, alas! the heavens became unpropitious, and I was soon enveloped in a dense cloud, and driven along by the furious wind. Not so pleasant a mode of conveyance is this cloudy chariot as poets would have us believe.—

> "At Venus obscuro gradientes aëre sepsit
> Et multo nebulæ circum Dea fudit amictu
> Cernere ne quis eos, neu quis contingere posset,
> Molirive moram, aut veniendi poscere causas.—Virg: Æn: i., 415.

The "pelting of the pitiless storm" drove everything to shelter except myself and a few Plovers. Shelter for me was not so easily found, but at length I managed to get under lee of the rocks which surround the Devil's Punch-bowl, a remarkable lake which supplies the Tore waterfall, and is situated at an altitude of two thousand two hundred feet above the level of the sea. It is said that this water, although always very cold, (and I can testify to its frigidity in June,) never freezes, and no fish are found in it. Good Trout fishing, is to be had, however, in the stream which goes from it to the Tore. Salmon, too, is abundant in the lakes; and those who enjoy the luxury of a meal off this delicate fish half-an-hour after he has been careering in his native element, will nowhere get it in greater perfection than on the banks of Lough Lene. I would not, however, conclude these remarks by appealing to such grosser feelings, but would congratulate those who have availed themselves of the facility afforded during the past summer for a visit to this majestic spot; and those who have not been I would yet congratulate, that in all probability the same facility, owing to the success with which the arrangements appear to have been crowned, will be offered in all probability in the following and future summers.

Blackheath, 1852.

NOTES ON THE MARINE BOTANY OF THE COAST OF NORFOLK.

BY C. H. D.

The following notes on the Algæ of the coast of Norfolk, perhaps may not prove unacceptable to the readers of "The Naturalist," not only from the interest which is attached to this portion of the Botanical science, but from the fact that many of our rarest species have been first found on this coast, among which I may mention *Cutleria multifida*, *Naccaria Wigghii*, *Taonia atomaria*, and others, most of which were discovered by the distinguished Algologists Mr. Dawson Turner and Mr. Wigg. The coast of Norfolk also presents that variety of locality which renders its Marine Botany so peculiarly

rich in many species which are rare in other parts of the kingdom.

In the present paper I shall confine myself to notes on the Sea-weeds of the class *Melanosospermeæ*. The first order, *Fucaceæ*, contains many species common on these shores, among which *Fucus vesiculosus*, together with *F. nodosus* and *serratus*, are very abundant on every part of the coast, and are the sorts mostly used for manure. The *F. ceranioides* and *canaliculatus* are also found on most parts of the coast, though much less abundant than the former. *Halidrys siliquosa* and *Himanthalia lorea* occur in plenty at Cromer. Of the genus *Cystoseira*, the most common species is *C. granulata*, which is not unfrequently found on the Yarmouth beach and elsewhere. *C. ericoides*, *fibrosa* and *fœniculacea* are very rare, being only found on the coast after a heavy gale. Among the *Sporochnaceæ*, the following species are found on these shores:—*Desmarestia ligulata*, *viridis*, *aculeata*, *Arthrocladia villosa*, and the elegant *Sporochnus pedunculatus*, none of which are at all common, especially the two last, which are very rarely found.

Of the third order, *Laminaraceæ*, the most common species on this coast is *Laminaria saccharina; L. digitata* is also found in tolerable plenty, but never attaining the size it is found on the more northern shores; *L. bulbosa*, *Phillitis*, and *fascia* also occur at Yarmouth, but are by no means common. *Chorda filum* is common on rocks and stones between tide-marks at Cromer and elsewhere; I am not aware, however, of the gigantic *Alaria esculenta* ever having been found on this coast. Many species of the *Dictyotaceæ* are found on this coast, among which *Cutleria multifida* and *Taonia atomaria* merit especial notice, both these plants having been first discovered on this coast, the former on Yarmouth beach, by Mr. Turner, in 1804, and the latter by Mr. Wigg: both species are very rare. *Zonaria parvula*, *Dictyota dichotoma*, and *Dictyosiphon fœniculaceus* occur in many places, and are far from rare. *Stilophora rhizoides*, *Punctaria plantaginea*, with *Striaria attenuata*, are found at Cromer and elsewhere, but are by no means common. *Asperococcus Turneri*, *A. echinatus*, and *Litosiphon pusillus* occur on various parts of the coast, sometimes plentiful: the latter is parasitical on *Chorda filum*.

The fifth order, *Chordariaceæ*, contains the following species found on this coast:—*Chordaria flagelliformis*, between tide-marks not uncommon, *Mesogloia vermicularis*, and *M. virescens*, not unfrequent at Cromer and Yarmouth during the summer months. *Leathesia tuberiformis* and *Ralfsia verrucosa* occur in tolerable abundance near Cromer and elsewhere. *Elachistea fucicola* is very plentiful, growing on *Fucus vesiculosus*. *Elachistea flaccida* parasitical on *Cystoseira fibrosa*, but very rare. *E. stellulata* is found occasionally, growing on the fronds of *Dictyota dichotoma*, but rare. *E. scutulata* and *velutina* occur not unfrequently on the thongs of *Himanthalia lorea*.

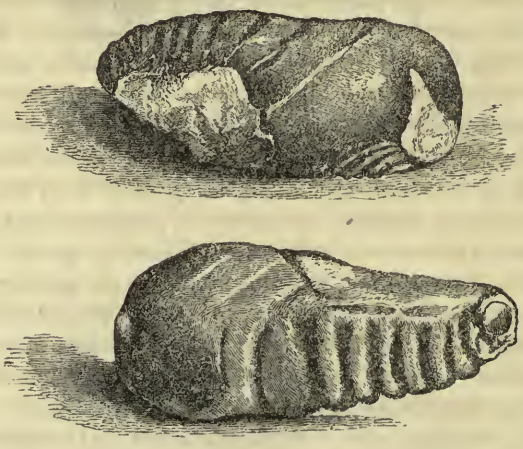
With regard to the species of the minute parasitic genus *Myrionema* found on this coast, I cannot speak with certainty. The only species I ever found was *M. strangulans*, growing on *Enteromorpha compressa*, on Yarmouth beach. We now come to the *Ectocarpaceæ*, the sixth and last order of the olive-coloured Algæ.

Amongst the most common are *Cladostephus spongiosus*, *C. verticillatus*, *Sphacelaria cirrhosa*, and *S. radicans*, all of which are found in tolerable plenty on most parts of the coast. *S. scoparia* and the beautiful *S. plumosa* occur but rarely. *Ectocarpus siliculosus* and *E. littoralis* are everywhere abundant. *E. fasciculatus*, *tomentosus*, *pusfillus*, *granulatus*, and *spœrophorus* are not uncommon at Cromer. *E. Hincksiæ* is found, sometimes plentiful, at Sheringham and other places on the north coast. *E. Mertensii:* I found a mutilated specimen of this rare Sea-weed on Yarmouth beach, in September, 1848, but have not met with it since. *E. amphibius* is not unfrequent in the salt-water ditches. *E. brachiatus:* a specimen of this rare species was found at Caistor, in this county, by Mr. Dawson Turner, as far back as the year 1801, and another was gathered in the clay ditches by Sir William Hooker, and which was figured in the "English Botany," (plate 2571;) neither of these specimens are, however, I believe, now in existence, and there seems to be much doubt whether the plant at present bearing the name of *Ectocarpus brachiatus* is identical with the one found by Mr. Turner and Sir William. *Myriotrichia filiformis* is found parasitical on *Asperococcus echinatus* at Cromer, but by no means common.

(To be continued.)

FOSSIL FOUND ON BAGSHOT HEATH.

BY O. S. ROUND, ESQ.



The accompanying cuts show in two positions a Fossil which I found upon the heathy ridge known as "Ribsdown," which lies to the left of the Great Western Road, between the twenty-third and twenty-fifth mile-stones. It lay amongst others which had been sifted away from the fine gravel by the side of one of the numerous pits that have been opened upon the crown of this range; and when it first attracted my attention, the slight turn which it had

in it made me suppose it to be an *Ostrea carinata*, but on picking it up I was puzzled, and not knowing what to think of it, submitted it to the inspection of that most excellent naturalist, Mr. John Quekett, of the Royal College of Surgeons. Professor Owen likewise inspected it, but they were both uncertain as to its nature, conceiving however that it is the *cast* of some shell. The colour is light gray, the light parts ochre yellow, and not, I think, extending *into* the Fossil. Perhaps some of the correspondents of "The Naturalist" can throw light upon the subject?

OBSERVATIONS ON MARINE POLYPES.

BY THOMAS NICHOL, ESQ.

(In a Letter to a Correspondent.)

In reply to your request that I should furnish you with the substance of my observations on the salt-water Polypes in this neighbourhood, I beg to say that it would give me much pleasure to do so, if I could believe they were likely to be of the slightest use. My knowledge of Natural History, as you know, is very limited, and the observations I have made on this particular department have been of so desultory and unscientific a character, that I cannot persuade myself they can be of any value.

You are aware that great numbers of Marine Polypes are to be found here, their habitat being chiefly on rocky ground between high and low-water-mark. I kept one of them for nearly two years, and several others for shorter periods, in basins of salt water, of course renewing it at intervals of two or three days. Believing that they must have some more substantial nourishment than the animalculæ contained in the water, I tried if they would use various kinds of food which I thought might be suitable for them Whilks, Mussels, and Limpets were what I chiefly offered them. If the object was dropt near the Polyp, it was invariably seized with its tentacula, and conveyed to its mouth. I have seen a shell nearly as large as the animal itself thus swallowed, distending the body all round.

The Polyp has the power of locomotion; for, although I never saw any of them in the act of moving, I have frequently found them at a different side of the basin from that at which I left them. But perhaps the most interesting circumstance connected with them was that some of them propagated while in my possession. I had at one time from twenty to twenty-five young ones alive, and probably twice as many gemmules were thrown off in the course of one summer from three individuals. I never saw the gemmules separate themselves from the parent, though I frequently watched for it. Some of the young lived for several weeks, if not months, under my care, and grew considerably in that time, but most of them died early, which led me to suppose that the side of a basin was not a suitable place for their development.

It is stated in books on Natural History that these animals may be cut into a great many parts, and that each part will immediately become a complete animal, and live and act as if nothing had happened to it. To test the correctness of this statement, I cut some of mine into several pieces; they seemed to be little affected by the operation, and each part continued to live as a distinct individual. Some of these I kept for a considerable time; but I felt satisfied they did not thrive so well or look so healthy as the Polypes that had not been so divided.

I find I have still in my possession a few notes of observations I made on three varieties of these creatures, the substance of which I shall transcribe.

1847, March 6th.—Received three large Polypes this morning, and placed them in basins of salt water.

No. 1, the largest, is covered by a sac or mantle, finely streaked with red stripes; the prevailing colour of the sac is dull gray, and it is covered with small transparent pimples about the size of pin heads: probably they contain water. When placed in clean salt water the sac is gradually withdrawn, and the animal appears a flattish circular body of considerable diameter, having the entire circumference guarded by the outstretched tentacula, as by a forest of tiny spears. Inside of this is a considerable space perfectly smooth, the colour beautifully variegated with different shadings of red, and in the centre is the orifice or mouth. This opening assumes a great variety of forms and appearances, the beauty and delicacy of which can only be properly appreciated when seen in the living object. Sometimes the lips rise a little above the surface, and curve elegantly over into the cavity. Their inner surface is generally of a white or cream-colour, and capable of great distension, as indeed the whole Polype is. The body is soft, yields easily to the touch, and exhibits a good deal of sensitiveness. The tentacula have considerable elasticity; they will seize the finger firmly, stretching considerably before they let go their hold; they likewise bend readily round any object placed within their reach, and carry it towards the mouth; in such cases, however, only the tentacula near the object seem to engage themselves; those at a little distance seem no way cognizant of what is going on. That the creature may spread to its full extent, it seems to gorge itself with water; perhaps it manages thus to seize any animalculæ or other matter the water may contain suitable for its nourishment. When it folds itself up it ejects a considerable quantity of water, and it then presents an appearance something like a large orange striped longitudinally, and firmly fixed by one end.

No. 2 is reddish in colour, not striped, but otherwise of a similar structure and arrangement to No. 1.

No. 3: the mantle is all but entirely white, which is likewise the prevailing colour of the body and tentacula, while they are beautifully tinted with red. The disc within the tentacula is transparent; in other respects it resembles the two former.

9th.—Changed the water, and gave each of the Polypes a small piece of

fish, which has been taken within the mantle, and probably into the stomach.

13th.—Gave each small pieces of fish and Cod liver, and also pieces of the rays or arms of Star-fishes, which have all been taken into the stomach, and apparently digested. Later in the day No. 3 disgorged two pieces of fish, which do not seem to have been in any way affected by their residence in its stomach. A little yellow gelatinous matter was also thrown up along with them.

Nos. 2 and 3 seem shy of displaying their tentacula during the day; but I have frequently found them finely displayed after dark. It is difficult to count the number of tentacula, but they are probably from one hundred and twenty to one hundred and fifty; they seem to seize every thing that comes within their reach, and to convey it to their mouth; but in doing so they exhibit no activity; the object is brought slowly forward, and slowly engulphed or rejected. The mouth opens towards the object, and enlarges itself to the size necessary for its reception.

I have lately read some Nos. of Dr. Johnston's work on Zoophytes, and am inclined to think, from the descriptions there given, the species I possess are referable to *Actinia coriacea*.

16th.—Changed the water to-day, of which each was very full, and when laid on a dry place gave it out very freely; indeed they seemed incapable of retaining it, for it spouted forth from the mouth, the tentacula, and even through the pores which seemed to open in the mantle. No. 1 disgorged with the water some pieces of Star-fish, which had been in its stomach for some days; they did not seem much altered, but a small piece which has since been thrown out seems to consist of the harder parts only. No. 2 also disgorged a piece of Star-fish to-day; it was half out when observed, and on being touched came very easily away.

19th.—The pieces of fish and Star-fish which I have from time to time given the Polypes appear to have been disgorged. I cannot say whether or not the animals have been nourished by them: I rather think not. Nos. 2 and 3 have repeatedly ejected Limpets, which they had previously swallowed, both in the shell and out of it. No. 1 has taken them frequently into its stomach; it throws up the shell clean in a day or two; the animal of the Limpet is also ejected, but it seems to have undergone some change, as it is thrown out in pieces. I offered a dead Limpet in the shell to it the other day, but it showed an immediate disposition to get rid of it, and by lowering its tentacula allowed it to drop to the bottom of the basin.

27th.—For the last week the Polypes have appeared to be much in the same state as formerly, except that No. 1 looks scarcely so healthy. I have given them occasionally pieces of fish and Cod liver. The former has generally, if not always, been disgorged; I am not sure if the latter has. No. 3 has been for the most part fully expanded lately, and a singularly beautiful object it is when in this state. On several occasions lately I have found Nos. 2 and 3 firmly attached to the sides of the basin in which they were kept, the

means of attachment being small points which are protruded from the skin. As No. 1 appears sickly, I have taken it and put it into a pool between high and low-water-mark, wishing to see if it will make its habitat there and recover.

April 1st.—I have repeatedly examined the pool for No. 1, but find it is not there; whether it has floated or been washed away I cannot tell. This morning put No. 2 into the same pool, but on looking for it in the evening, found it was gone. No. 3 continues lively, and frequently displays its tentacula. For several days past it has had no other food than what it may derive from the water in which it is kept.

23rd.—Gave No. 3 a piece of Cod liver yesterday morning; to-day I thought I saw small portions of it in the points of the tentacula, as if it were passing through the animal's system: it is easily recognised by its colour being of a deeper red than the animal itself.

May 4th.—The Polyp continues in much the same state as formerly. I have fed it occasionally with Cod liver, and feel persuaded that it derives some nutriment from it, and I have repeatedly noticed that portions of it appear to pass into the tentacula.

My notes conclude here, and I have little more to add, for at this distance of time it would not be safe to draw largely on the memory; indeed I fear I have already written at too great length. In addition to these I had several other Polypes, some of them differing considerably from those before described, but all exhibiting the same general characters. One of these was quite white, had a cylindrical body, and its tentacula were long and slender—in truth like a mass of hair. Another specimen had no tentacula at all, but instead it was surrounded by frills. Both of these were of great size, and measured from twelve to eighteen inches in length when fully expanded in the water; there was nothing remarkably different in their habits from those which I have already described. The habitat of these larger Polypes seems to be in water of twenty or thirty fathoms deep. They are drawn up on the fishermen's lines generally attached to a stone or large shell. I have seen them frequently in the harbour here, but they must have been brought in by the fishing-boats, and thrown overboard.

Dunbar, 1852.

Miscellaneous Notices.

A remarkable Kitten.--I had a very curious Kitten given me last week by Mr. Wright, of this town. It had neither mouth nor nose, and only one eye, and that stood exactly where the mouth ought to be. The eye, instead of being a light blue or slate-colour, and closed for several days--as is the general rule with Kittens--was open and clear; the iris was of a dark brown, and the pupil black. The skull, which I placed in an ant's nest to be cleaned, was in shape and size similar to a Jackdaw's egg. There were no holes in it or eye sockets, nostrils, or ears; in fact, there were but two holes in it, one of which was at the eye, where a small nerve communicated with the brain, and the other at the pole for the admission of the spinal marrow. The Kitten itself was remarkably large, and of course dead when first discovered. I have the Kitten preserved.--Michael Westcott, St. Cuthbert's Place, Wells, Somerset, Sept. 13th., 1852.

Singular colour of a Water-Rat, (Arvicola amphibia.)—A large bright buff-coloured Water-Rat was sent me last week for preservation; it was shot near Derby, on the Railway.—W. Bond, Frog Island, Leicester, October 2nd., 1852.

Occurrence of the Goshawk, (Astur palumbarius,) *in Yorkshire*.—Two Goshawks, male and female, were shot near Easington, near the north-east coast of Yorkshire, on the 15th. of last October, by S. Gibbs, keeper to H. Kirk, Esq., of Stockton-on-Tees.—D. Graham, York, Dec. 1st., 1852,

The Black Stork, (Ciconia nigra,) *in Yorkshire*.—A magnificent specimen of this extremely rare British bird was brought in the flesh to Mr. Graham on Friday evening, October 29th. last, to be stuffed. It was shot on Market-Weighton common, by Mr. Wake, of Market-Weighton. It was an old male in very fine plumage. It is, we believe, the fifth that has occurred in Britain. Mr. Graham, with his accustomed ability, has made a splendid specimen of it. It is now in the Museum of the Yorkshire Philosophical Society.—B. R. M., York, December 1st., 1852.

The Pheasant, (Phasianus Colchicus.)--A singular incident occurred last week in an adjoining parish. A party of sportsmen started a Pheasant, which in its eagerness to escape dashed so violently against the trunk of a tree as to fracture its lower mandible, when it fell to the ground, and was picked up by the dogs.--C. A. J., Callipers Hall, Rickmansworth, September 18th., 1852.

Scolopax rusticola.—A Woodcock was taken in this town on the 9th. of the present month, in rather a singular manner. One of the porters of Messrs. W. and J. Cooper upon going into their iron warehouse, was surprised to see a strange bird seated upon the back of a stove; it allowed him to approach and take it into his hands without attempting to escape. The poor bird was soon transferred to a fishmonger's, where I saw it. The warehouse door had been left open till half-past six the previous evening, and it is most probable that the bird entered in the dusk, perhaps it sought shelter there immediately upon its arrival. It was in good condition, and seemed quite healthy.—T. Southwell, Lynn, Norfolk, October 16th., 1852.

Richardson's Lestris, (Lestris Richardsonii.)—A male specimen of this bird in the plumage of the second autumn was shot here on the 16th. of September. A pair of the Arctic Skua, *(Lestris parasiticus,)* were shot at Hemstanton, on the 11th. of September. All the species of Lestris are somewhat rare, and seldom occur here in the adult plumage.—Idem.

Storm Petrel, (Thalassidroma pelagica,) seen on the 6th. of October, flying over the Ouse, near Lynn.—Idem.

Rare Birds at Reading.--It may be interesting to the readers of your admirable periodical to know that an adult specimen of the Common Tern, *(Sterna hirundo,)* was shot here this morning. The length of the bird is from the tip of the bill to the tip of the longest tail feather fifteen inches and a quarter; length of the wing from the wrist eleven inches and a quarter. These dimensions do not agree with those given by Yarrell, but are rather representative of the Arctic Tern, still the colour of my specimen is altogether lighter than the one figured by him; and although the breast is slightly tinged with pearl gray, yet it is decidedly lighter than that which pervades the upper surface of the body. The bird is apparently one of considerable age. It appears to have commenced moulting, as the feathers drop out rather, and others not fully developed are observed. A young specimen of this species was shot on the Thames here, in the second week in October, last year; it rose with a number of Rooks, and had apparently been feeding in their company on the river-side. Adult specimens of the Black Tern, *(Sterna fissipes,)* are occasionally met with. In the autumn of last year a specimen of the Little Bustard, *(Otis tetrax,)* (I think a female,) was obtained here. A Coot was shot a week or two ago. These birds are not very common in this locality; I met with two in January last, and also with a couple of White-fronted Geese, (*Anser albifrons.*)--J. C. Wilson, Victoria Square, Reading, September 14th., 1852.

I have at this time in my possession, alive, a specimen of the bird described by Swainson, (Birds of W. Africa, Nat: Libr:) as *Crithagra chrysopyga*, or Yellow-rumped Bullfinch. It was taken by a bird-catcher, named Lavender, on the 24th. of June, near Eastney Fort, about a mile from this place, in company with Linnets. It is a male, and has a very pretty song.

The figure and description given by Swainson are sufficiently accurate, except that the bill and legs are, in my specimen, *dark* brown. I should also prefer for the upper plumage to read 'olive *green*' for 'olive' *grey*;' though you know how difficult it is to characterize some of those undecisive colours. My brother has also a male Serin, captured in April about the same locality. He has paired it with a hen Canary, and had a nest of males, which are unfortunately deceased. The hen is, however, building again. The Serin was very attentive, feeding her on the nest. Last summer I sent some notice to Mr. Yarrell of a *Fringilla Hispaniolensis, (Fring.* or *Pyrgita, Petronia,)* shot four or five years previously in Mr. Thistlewayte's woods, about five miles from here. It was brought newly-killed to Mr. Elkins, who keeps a "curiosity shop" in Broad-Street, and by him set up. I took some pains to ascertain this statement, and am myself quite satisfied of its correctness. The specimen is now in the Museum of the Philosophical Society of this place. I shall be happy to furnish any further particulars if you desire them. --William Hazel, (in a letter to the Rev. F. O. Morris,) Portsmouth, July 6th., 1852.

A White Starling, (Sturnus vulgaris.)—A pure White Starling has been seen the last three or four weeks, amongst a flock of its own species in our Abbey meadows.—Thomas Turner, Friars, Leicester, October 6th., 1852.

On the 14th. of this month, I saw near this place, a flock of more than twenty Fieldfares, *(Turdus pilaris,)* which is, I believe, very early in the season for them to make their appearance here.—Thomas Kirkham, Fairfield, near Manchester, August 17th., 1852.

A White Robin.--From the Dumfries Courier, about the 15th. of May last, I copied the following: --A few days ago, Mr. Rimmer, who is an enthusiastic ornithologist, observed a small light-coloured bird in the grounds of Kirkmichael house, which he did not recognise. He shot it, and discovered it to be a Robin, with the usual orange-red breast, but the rest of the plumage of a light cream-colour. The specimen procured by Mr. Rimmer has been stuffed, and placed by the side of an ordinary bird, compared with which it appears about a third smaller in size, and is altogether of a weaker build, bearing out the idea that Albinos are either diseased or weakly. The back is white, with a few streaks of light brown; the belly with more white than usual; the wings nearly all white, with a few pale olive feathers; and the legs very light coloured. It is only in the distinguishing red breast that its plumage at all resembles that of the ordinary Robin.--George B. Clarke, Woburn, Beds., June 9th., 1852.

Robin's nest attacked by an Adder.--The following is copied from the Newcastle Courant:--Charles Newall, granite hewer, in Dalbeattie, was plying his vocation on May 20th., at Craignair quarry, when he heard a bird's distress; hurrying to the spot, he discovered a Robin in the greatest agitation. An Adder, twenty inches long, had dragged itself up the face of the quarry, and was protruding its head over the edge of a nest built among the brushwood, and containing poor Robin's unfledged offspring. She was alternately coming down upon the spoliator, darting her beak into his forehead, and rising to the height of a yard or so above the scene. It was the act of a moment for him to dislodge the aggressor. While he was killing the Adder the bird perched upon his arm, and watched with intense delight every blow inflicted on her enemy; and when that enemy lay dead, alighted upon and pecked the lifeless trunk with all her vigour. She then entered her nest, and having ascertained that all was safe, swiftly repaired to a neighbouring branch, and piped as best she could, what was no doubt meant for a hymn of gratitude, and song of triumph.--Idem.

Domesticity of the Robin.--The undermentioned I copied from a London Weekly Paper, of June 5th.--A very singular instance of the docility of the Robin may be seen in the village of Bishop's Cleeve, Gloucestershire. A Redbreast has quartered itself in the sitting-room occupied by the family of a shoe-maker, named Yeend; it has taken up its abode on the mantle-piece, behind a tea-pot, where, having built its nest and laid its eggs, it may now be seen sitting without apparently being in the least incommoded by the presence of the family or strangers, of whom it takes no notice. The bird will allow itself to be handled, and even caressed on its nest. It takes its food fearlessly from the family table, and appears to recognise the different members.--Idem.

I obtained this morning the following rarities:--A very fine young specimen of the Little Bittern, *(Ardea minuta,)* and a fine specimen of *Acherontia Atropos.*—T. S. Rudd, Redcar, September 29th., 1852.

The Swift, (Cypselus apus.)—The stay of the Swifts has been unusually protracted in this neighbourhood this year. They appeared pretty regularly up to the 19th. of August, and again to day, the 26th., I saw three or four. White, of Selborne, mentions the usual time of their departure as the first few days in August, and refers to the appearance of the bird as late as the 27th. as a very unusual occurrence. Markwick, in his Calendar, which is compared with that of White, in one edition of the work of the latter, mentions August 11th. as the last date of his observations of the Swift. Yarrell says they usually leave by the middle of August. I attribute this protracted stay to an abundant population in the insect world.—J. C. Wilson, Reading, August 26th., 1852.

I have to add to the above note, that I saw one as late as the 17th. of September. That I was not mistaken I am quite sure, as I am well acquainted with its flight and appearance. It did not appear to be migrating, but was hawking about for flies as usual in summer.—J. C. W., October 14th., 1852.

The Pied Flycatcher, (Muscicapa atricapilla.)—A specimen of this bird was shot at Worthing, on the 17th. of September last. It is either a young male of the year, or a female; though which I cannot say with certainty, never having had opportunities of comparing specimens.—Idem.

Martins in London.—October 8th., 1852. This day I saw numbers of Martins, (*Hirundo urbica,*) in several of the streets in London; they were apparently hawking for flies, and were especially numerous in that densely crowded thoroughfare, the High Street, Southwark, and in the immediate vicinity of London Bridge. The weather is very cold, and many of these birds have been observed in other parts of the town numbed, and scarcely able to fly.—E. K. B.

Note on the Frog, (Rana temporaria.)--I was sitting in my drawing-room this very wet morning, when I was called away from my book by the sudden exclamation from one of the children, "Here's a Frog crawling up the window!" Strange as was the intelligence, it proved to be true. With arms and legs expanded on the wet glass, and adhering to it with all the under surface of the body, sprawled a half-grown Frog, motionless, but with sparkling eyes, and breathing naturally, as the rising and falling cheeks clearly proved. After resting a few minutes it began to stir, and with remarkable activity ascended several inches, moving its limbs exactly as a sailor does when climbing the shrouds. Again it became stationary, supporting itself, however, without effort, and soon after mounted another stage. A third movement, a sidelong one, brought it to the wooden frame of the glass, which it partially crossed, clinging to it with one hand, and adhering to the glass with the other hand, its throat, and chest, the legs hanging free. Its hold now was evidently not secure, and in about a minute it fell back upon the window-sill outside. About four feet below the window is an iron grating, placed over a pit, constructed to admit light into a cellar window. In this pit a number of Frogs had taken refuge in the scorching weather of August, and here, I supposed, they were doomed to spend the rest of their lives; but this ambitious traveller must have taken advantage of the wet weather to climb four or five feet of rough masonry, four feet more of smooth painted wall, and about ten inches of polished glass. Is this climbing power of Frogs known, and may it not help to account for the strange situations in which the batrachian tribe are sometimes found.--C. A. J. Callipers Hall, Rickmansworth, September 18th., 1852.

The Locust, (Locusta migratoria,) *at Redcar.*—A boy captured here on Saturday morning, September 11th., a specimen of *Locusta migratoria*, and another was captured in the village, the same day.—T. S. Rudd, Esq., in a letter to the Editor.

Capture of the Death's Head Moth, (Acherontia Atropos.)—On the 28th. of last May this rare and splendid Moth was taken in a house not far from where I live. The inmates were quite amazed, and the neighbours were called in to see the "monster;" the better however to exhibit poor "Death" to the wondering, gaping throng, they tumbled him into a glass, and he was there kept till "Life" had nigh "run out of Death." It is now taken better care of, and is, after all, a very fair specimen.—William Bond, Frog Island, Leicester, October 2nd., 1852.

Acherontia Atropos *at Redcar.*—Several specimens of the Death's Head Hawk Moth have occurred here lately.—D. Ferguson, Redcar, October 26th., 1852.

Comatula rosacea *at Redcar*.—A very fine specimen of this rare Star-fish was taken here yesterday.—Idem.

The Eel, (Anguilla acutirostris.)—A short time ago, I read in one of our provincial papers, an account of an Eel being taken, which when opened, was found to contain a kitten. My conscience, I must confess, is somewhat elastic, but this story staggered my belief at the time. A friend of mine, Mr. Brooke, of Missex, Lincolnshire, however, assures me that he was once fishing in the River Idle, and caught a very large Eel, which was found to contain a full-grown water-rat. *This fact* somewhat strengthens the first part of the story, and prepares us to swallow it without such a stretch of gullibility. On wet summer nights, in the same locality, Eels have often been caught gliding amongst the grass, in quest of food, which appears principally to consist of small frogs and slugs. Many have been met with nearly five feet in length; this has often given rise to marvellous stories respecting snakes infesting certain fields, much to the terror of many a simple rustic, who generally imagines himself to have been hotly pursued by a formidable member of the genus. I should not like to spoil the 'penchant' of any Eel-pie epicure with more facts concerning this semi-reptilian creature, of whose peculiar habits much remains to be written.—John Dixon, Leeds, August 9th., 1852.

Proceedings of Societies.

Royal Physical Society of Edinburgh.—The first meeting of the eighty-second session of this Society was held on Saturday, the 13th. November, at two o'clock, at 6, York Place, when there was a very full attendance of members and visitors. Dr. Coldstream, on taking the chair, delivered the opening address, for which the cordial thanks of the Society were tendered to him.

We much regret that our space will not allow us to insert the address *in extenso*, but we cannot omit the concluding tribute to the memory of three excellent naturalists whose valuable contributions to science will long be remembered and prized. "Allow me, in conclusion, to advert to the good examples of earnest diligence as naturalists, which were set before us by those distinguished men who have been removed from amongst us by death within the last year or two. I refer to the late Sir John Graham Dalyell, Dr. Patrick Neill, and Professor M'Gillivray, of Aberdeen, each of whom has left a blank not soon to be filled up. Scotland has had few, if any, such accomplished naturalists. It well becomes this Society affectionately and respectfully to cherish the memory of these excellent men. Sir John Dalyell was appointed first president after the revival of this Society; and, although his bodily infirmities prevented him from attending our meetings, we received many proofs of his interest in us, and of his constant desire to promote our object. Of the singleness of aim, indomitable perseverance, profound sagacity, and wonderful success with which Sir John, throughout the course of his long life, gave his days and nights to the searching out of the most obscure parts of the great plan of creation, we may be thankful that so admirable and valuable a monument is preserved to us, as appears in his "History of Rare and Remarkable Animals of Scotland," the completion of the publication of which has been entrusted to our distinguished associate Dr. Fleming. To go through that wonderful work is, indeed, to sit at the feet of a great master, in whom we rejoice to see not only an extraordinary amount of knowledge, but a deep veneration for Him whose works he would attempt to unravel. We shall all expect with interest a full biography of Sir John from Dr. Fleming, when he shall have completed the publication of his posthumous works. Dr. Neill also was a member of this Society. He entered it from the Natural History Society in 1812. Few men of his day knew so much from personal observation of the zoology and botany of Scotland, as did Dr. Neill. Those who knew him personally (and these were indeed many) will long remember his modesty, simplicity, and acuteness as an observer, and his kindness, stedfastness, and sincerity as a friend. His public spirit was ever active; and to it we are indebted for the institution of the Caledonian Horticultural Society, and of the Zoological Gardens, as well as for abundant and self-denying labours in connexion with many other scientific and charitable institutions. His wondrous little treasury of plants and animals at Canonmills was indeed an earthly paradise to those who could appreciate the moral excellencies of the possessor, as well as the riches of the spot. Professor M'Gillivray was a native of the Hebrides, but resided in

Edinburgh for many years before his removal to the Chair of Natural History in Aberdeen. Here he filled in succession, and with great credit, the offices of Assistant-Keeper of the College Museum, and of Conservator of the Museum of the Royal College of Surgeons. He was a most laborious student and exact observer. His published works prove how well acquainted he was with a large range of subjects in Natural History. Doubtless, had his life been prolonged, he would have done much to extend the science and to foster a taste for the study of Natural History."

Mr. Hugh Miller then read a paper on the ancient Grauwacke Rocks of Scotland, with a historical sketch of the progress of geologic discovery among them during the last sixty years, and a brief description of what is at present known regarding their place, character, and organisms. The paper was illustrated with a fine collection of Scoto-Silurian fossils. On the motion of Professor Fleming, the thanks of the Society were unanimously voted to Mr. Miller for his valuable and interesting paper.

Natural History Society of Glasgow.—The ordinary monthly meeting of this Society was held in the Library of Anderson's University, on the evening of Tuesday, the 5th. of October, when there was a full attendance of members.--Thomas Gray, Esq., Vice-President, in the Chair.

Specimens of the Stormy Petrel from Iona, were exhibited by Robert Gray, Esq., who also read a very interesting letter from Henry D. Graham, Esq., descriptive of the habits of that bird.

A paper was read by Mr. John Gray, on the local distribution of the British Sphingidæ, with special reference to the changes caused by cultivation, and the anomalies thereby presented in the geographical range of the various species. He concluded his paper by a general review of the similarity and dissimilarity, where such existed, in their British and continental habitats, with some remarks on the utility of a proper understanding of the geographical distribution of the Lepidoptera, and its bearings on collections of local fauna.

The following recent observations on the House Fly were communicated by James Napier, Esq.:--

On the day of the last severe thunder storm in August last, I observed, immediately after the storm had passed, my parlour window facing the storm literally studded with dead flies adhering to the glass; beside each fly was a small opaque cloud, composed of a white gummy matter that appeared to have been ejected by the fly, and that very recently, from its being soft. That it had been simultaneous with the death of the insect, I think evident, from the wings and feet in most cases being covered with it in such quantity as to make it impossible for the insect to fly or walk. In all cases the insect was adhering to the glass by this gummy substance, some by the feet, the wings, and the mouth or sucker of the proboscis; in every instance this sucker was at its full expansion, as if blowing out; and in two cases, out of the few examined, the proboscis was ruptured or burst in the side.

Whether the death of these insects took place during the thunder storm, or in consequence of it, I cannot affirm; but they had all died within the space of a few hours, and that insects are affected by sudden or great atmospheric changes can hardly be doubted. I have spoken with several persons who observed the same sudden mortality among the flies about the same time, and also the invariable spot of dirt, as it was commonly called, contiguous to each insect.

In connexion with this gummy matter, I may add a few observations first made some years ago. About the latter end of summer, (the month of August,) flies will often be observed standing perfectly motionless often for a period of fifteen or twenty minutes; examining them during these moods by a lens, it will be observed that they are not entirely idle, but are blowing out from their proboscis a fluid, which they hold at the mouth of their trunk as a globule, often as large as the head of a small pin. This globule the insect sucks in and blows out every few seconds, occasionally drawing in the proboscis and again throwing it out, evidently with great enjoyment. These drops of fluid often fall on the place where it stands, and form gray-coloured round spots, which soon get dark and constitute a great portion of that termed *fly dirt*. I have seen several of these drops fall in a few minutes, exciting some apprehensions at the consequences were it continued. May not this account for the fact, that dead flies are always dry and empty? The fluid, by reflected light, is of a cream-colour, viscid and gummy, and occasionally little specks of air and dust are seen in it, but no revolving motion has been observed.

May not the exposing of this fluid and sucking it in again give an enjoyment to the insect, while it hastens the termination of its existence?

The following curious fact in the history of the remarkable genus Xylophaga was recorded by Edward Charlesworth, Esq., F. G. S.:--

Some time ago I was carefully breaking up some masses of wood from Ardrossan, (kindly sent me by Major Martin,) for the purpose of extracting the inclosed shells of this mollusc, when I was surprised to find an entirely new feature in the economy of the animal, namely, the presence of a case or tube, lining the chamber occupied by the creature, and extending from the valves of the shell to the open extremity of the chamber. The tube is not shelly like the tube of *Teredo*, but has rather the appearance of being formed of minute particles of wood cemented together. It adheres so slightly to the walls that I dare say it has escaped notice by falling out when the chambers have been broken into. I have only observed it in a small proportion of cases, and then in chambers that were excavated to a greater depth than usual; its occasional presence, however, would not be a greater anomaly than the finding the *Lima hians* in most localities *free*, but in Lamlash Bay, Arran, always inhabiting a nest.

I intend to get one of these tubes analyzed, and I shall then publish a more detailed account of its occurrence. In the meanwhile you may think the circumstance sufficiently interesting to bring under the notice of your members, some of whom may perhaps be able to confirm my observations.

It was confirmed by one member who had once observed this curious tube.

Mr. John Young, Campsie, was admitted a corresponding member.

BRITISH MUSEUM NATURAL HISTORY.

The Querist.

What cause can be assigned for the mortality which annually takes place amongst Shrews, particularly the common species, *Sorex araneus?* I have frequently found specimens dead in gardens and fields as well as hedge-rows, and none of them ever exhibited any external mark of injury. It is a common belief that cats will not eat Shrews when they kill them, and I was long satisfied with this explanation, though I could not account for the fact that it was only in summer and autumn the dead Shrews were seen. Is it true that at these seasons Shrews are affected with a peculiar odour, which obliges animals of prey to leave them in the spot where they are killed? One morning when out for a ramble shortly after sunrise, I observed seven or eight lying dead by the side of a wood, and one of them was a Black Shrew, (*Sorex fodiens;*) some of them still retained heat in their bodies and were not stiff, and the last I discovered was just expiring. The season was a dry one, and the death of these creatures I imagined might have been caused by thirst. On the afternoon of the same day as I was walking on the public road, a Shrew suddenly dropped down before me, and lay in the dust kicking convulsively for a few moments, and when I lifted it I could not see a scratch upon it.—It died in my hand. If disease be the cause of dissolution, the malady proves suddenly fatal, and attacks the Shrews chiefly during the night. Wild Rabbits are subject to a similar disease, and they are seized about the same time of the year.—G.

Can any of your readers inform me at what age the Common Gold Crest, (*Regulus auricapillus,*) acquires the plumulet which covers the nostrils, or suggest any cause for the occasional absence of that feature? or describe from personal examination the differences between this bird and *Regulus modestus* of Gould?—G.

Do the Hirundinidæ moult in the autumn, or what is the general rule for birds of passage? —O. N. Knox, Callipers Hall, Herts.

On the 19th. ult. as I was standing on a slight eminence near the sea, in the neighbourhood of Luccombe Chine, Isle of Wight, I observed a black-coloured bird with a crimson breast, not very bright, and rather inclining to roseate, fly across a small dell which was below me, so that I obtained an excellent view of it. In size and general appearance it much resembled the Blackbird, and had it not been for the colour of the breast I should have pronounced it to have been one. A relation who was with me also saw it, and her statement agrees with mine. Perhaps some of the subscribers to "The Naturalist" can tell me the name of this bird?—Edward Ernest Stride, Highbury Park, Islington, near London, September 15th., 1852.

BRITISH MUSEUM NATURAL HISTORY

LETTERS OF AN ORNITHOLOGIST.

(Continued from Vol. II, page 164.)

Letter III.

Iona, April 5th., 1852.

As to D's remarks about the Petrel's burrows being made by Rabbits, this may be a mere inaccuracy on his part; or it is very possible that the Petrels take advantage of Rabbit-holes when they occur upon their breeding-stations, as the Puffins and Shieldrakes, I believe, do; though among our islands *these* are obliged to make holes for themselves, as there are no Rabbits to assist them. The Stormy Petrels' holes at Soay, have, exteriorly, very much the appearance of Rabbit-burrows, but, on excavating, the resemblance ceases: there would scarcely be room for a Rabbit to conceal his whole body in one. The entrance, though wide, extends but a very slight depth below the surface of the ground; it immediately contracts into *one* or *two* very small passages, only capable of affording ingress to such a diminutive creature as a Mouse or Petrel. These large entrance halls seem to be of great age, overgrown with moss, and the small galleries seem more recently made, or at least *re-bored.*

Last year I found a Wheatear's nest formed in the entrance, while the back premises were tenanted by two pairs of Petrels, who must have been forced to walk over the Wheatear's back whenever they came out. None of our small islands contain Rabbits, but if they were once introduced they would thrive and multiply wonderfully. A small rocky islet off the town of Tobermory, called *Calve Island,* was thought to be turned to some account by a former proprietor, who stocked it with Rabbits of a superior breed. In the course of time these so destroyed the pasture that a later proprietor wished to get rid of them; but they utterly defied all his efforts to extirpate them. Rabbits are abundant in Iona now, yet the man is still alive who introduced the first pair into the island. Hares were also very recently introduced into Tiree island. I have frequently met with Hares upon little islets a quarter of a mile from the mainland, which they must of course have reached by swimming; but Rabbits I think never take the water, even for the shortest distance, though they frequent the sea-shore for the sake of sea-weed. There are some tempting islands hardly a gunshot from the mainland of Iona, which are never visited by Rabbits.

Most of the small islets and rocks within a moderate distance of the coast are infested by Rats, which subsist upon the shell-fish, crabs, birds' eggs, etc. Fortunately these rascals have not reached Soay; it is too far out for them, clever swimmers as they are. If they once get a footing there, they will quickly banish Petrels, and every other bird from nestling there more. I was often disappointed during the egg season, when searching for sea-fowls' eggs, to find many promising-looking rocks untenanted; but I soon discovered that the cause of it was the Rats had penetrated to them, and the birds

instinctively avoided these spots. A few days ago my terrier turned a Rat out of a hole in the sand, and being hard pressed, it boldly jumped into a small pool of water, diving immediately. The water being clear, I could see him distinctly swimming about near the bottom, exactly like an Otter in miniature: I was very much surprised at his power of endurance. Whenever he rose towards the surface, he saw the Dog's nose suspended over the spot where he was about to rise, and down he would dive again to the depths of the pool: becoming a little exhausted at last, the dog dived down after him and killed him. You meet with Rats in the most out-of-the-way situations; I have taken them in traps set for birds among the hills, and once upon a small island in the middle of a loch. The island is quite bare, and not larger than a table; so he must have swam out there on a voyage of discovery.

A few months ago I took a Mallard in a trap, as he was frequenting a spot where I could not get near him; when he made, in due time, his appearance at table, we found several grains of No. 3 quite inside his body, which seemed to have been there a long time; yet he was in excellent condition. That was an unlucky bird, yet I pity more the poor fellow who lost him, and perhaps accused himself of having missed a fine shot. I have sometimes got birds, (as a Pigeon, Golden Plover, or Dunlin Sandpiper,) with only one leg; that is to say, they seemed to have lost one foot, or else were naturally deformed; but these were always in as good condition, and as fat, as their companions, who had the advantage of possessing a proper assortment of legs. The winter before last I caught a Gannet which had one leg diseased in a very curious way: it was swollen to more than double the natural size, and was full of dark-coloured blood. He swam in from the sea, and walked up on to the rocks where he allowed himself to be taken without attempting to resist.

On Saturday I shot a pair of Teal upon a small loch in Iona, which reminded me of an adventure I had there a long time ago, and which I mention, as you say that you sometimes act as your own retriever:—I had shot a nice little Drake Teal in the middle of the loch, which I was very desirous to get, as I wished to take a drawing of him; but having no dog, I stripped and went in after him, the water was not beyond my depth, but the bottom was very soft oozy mud, which held one's feet as firmly as the stocks, while all around, the water was filled with a tangled mass of aquatic plants, which closed about one's limbs like a strongly-woven net; and there I hung like a fly in a cobweb, floundering about like Milton's Satan in chaos. It was a very long time before I could extricate myself, and I was very nearly sticking there for good; however I secured my bird, but resolved not to be without a dog in future, as such places are excessively dangerous.

The dog I have used since, is a Skye terrier, a small bluish gray one, which takes the water well; his feet are as webbed as those of an Otter, and his small size and his colour resembling that of the rocks, render him almost

invisible—a great advantage when stalking or waiting for birds. Being accustomed to the boat I find him sometimes useful: when he sees birds upon the water he makes a decided point, sometimes before I can detect them, especially when rowing alone in a punt, when of course one's back is turned on everything that may be ahead.

Another very necessary part of one's equipment is a glass of some kind. I formerly used a small telescope, but I have long given up carrying that, it being so cumbersome, and involving so much time, trouble, and the use of both hands every time it is looked through. A small single-barrelled opera glass is far more useful, as it may be fixed at the right focus, and so can be pulled out of the pocket, and used by the left hand alone, while the gun may still be retained in the other. A glass of this kind will of course not command such a long range as the telescope, but they are made of very considerable powers, sufficient at least for most occasions. It is very useful for detecting birds upon the water, when one is boating, or for discovering them among rocks, or among reeds and cover; and by twilight it is superior to the telescope, as it contains fewer glasses, and does not consequently absorb so much of the light.

The Ravens have got their new nest in the locality I expected they were going to adopt. Here, in a high cliff they have taken up their residence in an old nest formerly built by a Peregrine, but since tenanted by Hooded Crows. The nest being ready built, it only required a fresh lining. The place I think is totally inaccessible; however I may sacrifice one of the old birds for the sake of its skin, should it be wanted.

I have got two more Black Guillemots' skins for you which exhibit the changes the plumage undergoes between winter and summer. The Wheatear arrived here on the 21st. of March.

Last Saturday, the 3rd. of April, I found a Rock-Dove's nest containing young ones, which is unusually early.

(To be continued.)

THE HERRING GULL, (*LARUS ARGENTATUS.*)

BY GEORGE DONALDSON, ESQ.

In the month of June, a few years ago, when on a visit to Ailsa Craig, in the Frith of Clyde, a very young specimen of this bird was taken from a nest by my friend, Mr. Kemp, who accompanied me on that occasion. He shortly afterwards put it into his garden, in the neighbourhood of the city, where it was for some time unable to provide for itself, during which he fed it upon various articles of a domestic nature, such as broken bread, potatoes, etc. In the course of a month afterwards he was relieved of all his attentions by "Snow," as I named him, foraging for himself amongst the bushes and vegetables, where he fed on various caterpillars, slugs, flies, and beetles. He was constant in his attendance on Mr. Kemp while engaged in digging and

transplanting, and never failed to pick up every creeping thing which was turned up during the operation. He was particularly shy when strangers were present, and never in one instance would permit any familiarity, excepting with a small rough Scotch Terrier belonging to this gentleman, to which he was particularly attached; for after pulling her by the tail, (which she never appeared to relish,) he would make up the matter by picking from off her rough mouth any particles of food which he found adhering there. He was exceedingly playful, and appeared to enjoy himself amazingly by throwing up into the air any small bones or pieces of wood which he had fallen in with, and always exhibited the greatest terror of either them, or any other object coming in contact with his legs.

At the end of twelve months his plumage corresponded with that of other young birds, and when he was two years old the change was very trifling. At this period, however, he acquired a taste for Sparrows, and scarcely a day passed on which he did not regale himself with four or five of them. His system of catching them was this:—He was upon the best terms with a number of Pigeons which this gentleman had, and as the Sparrows fed along with them, he mixed in the group, and by *stooping* assumed as much as possible their appearance, and then *set* at the Sparrow as a pointer dog would do his game; the next instant he had his prey by the back, and swallowed it without giving it time to shut its eyes. The sporting season began with him about the middle of July, as the young birds were leaving their nests; and as numbers of them were produced in Mr. Kemp's garden, and others came to *practise* there, they found it very slippery ground; for the enemy was upon them in a moment.

At the expiration of three years his plumage was assuming a lighter shade, although the gray feathers on the under part of his body were quite apparent. He pursued his old system of snatching and swallowing with great success; and arrived at so much perfection in the art, that he caught his prey often while flying past, and occasionally sprang from the ground, and struck a bird down with his wing, which he had no difficulty in afterwards capturing.

On one occasion while standing near a pump well in the garden he pounced upon a Rat, which had come there for the purpose of drinking; it squeaked on being caught, and Mr. Kemp, who was standing close by, looked immediately around, and had scarcely time to see it suddenly disappear head foremost, a rule which he strictly observed, with both the living and the dead; for many Thrushes, Finches, and Wagtails I supplied him with. Mr. Kemp has little doubt, but many Rats were surprised in the same manner, as he frequently observed "Snow" sneaking about the well.

His appearance during the act of running down the young birds amongst the bushes, was very animated: his neck was extended, his eye sparkled, and his body appeared compressed to half its usual size, which rendered his expression very different from the *dozy*-like appearance which he assumed while watching Rats and *old* Sparrows.

At the end of the fourth year he appeared to have completed his *Toilet*, and although his garments at that time did not exhibit the hue which the deep blue sea imparts to them, still his appearance was very creditable, considering the narrow bounds to which he was restricted.

In the preceding remarks I have confined myself entirely to his habits while in confinement; for I presume his habits naturally are sufficiently known. Independent of his love for *fish*, he is a good judge of *fowl*, and much amusement I have had by witnessing him struggling through a legion of clamorous Kittiwakes, stationed along the front of a precipice, which appeared to be taking satisfaction on him for having eaten up some of their families.

This is quite a common occurrence, and I have little doubt that, when opportunity occurs, his young are for some time principally supported at the expense of this harmless and interesting community; for the young of both are produced about the same period. I think we are quite entitled to suppose that, from the great length of time which this bird takes to arrive at maturity, he is long-lived; although I am not aware that he has ever been allowed a place amongst the patriarchal races of Swans, Eagles, Ravens, and Pelicans; the ages of which are recorded from one hundred up to three hundred years; and I am inclined to think that if "Snow" had not been unfortunately killed at the end of his sixth year, he might have lived to the age of "*Ole* Uncle Ned!"

I have been informed that the habits of (*Larus fuscus*,) the Lesser Black-backed Gull, are equally rapacious; but never having seen him, I feel inclined to give him the benefit of any doubt. As far as my experience goes, however, I am bound to acknowledge the Blue-back, (*L. Argentatus*,) a most distinguished cannibal, and superior to any other class amongst the fowls of the air. He gives no quarter, and consumes the unfortunate slowly within his interior—just as the court of chancery does with a great estate. This Gull arrives at Ailsa Craig early in April, lays three eggs about the middle of May, and the young take wing about the 20th. of July; there is little difference in colouring or size between the eggs of this bird and those of the Lesser Black-back, and if any does exist, it is in those of the latter being occasionally found a shade darker.

As the nidification of birds has of late created some little attention, it affords me an opportunity of describing in what manner these two birds begin their domestic arrangements for the season. They display no cunning whatever in selecting a situation for their nest, which consists of a variety of torn-up weeds and grasses, *in place* of the dried and brushy material usually collected by other birds for that purpose; and the great majority of those which I have found have been quite exposed, and in many instances close beside detached fragments of rock, in situations closely approaching to table land. Necessity very frequently compels them to place their nests where neither pasturage nor any other kind of shelter affords them any protection; but from this circumstance I do not consider that any rule ought

to be laid down, as to the situations where these nests are to be found.

The nest is a very comfortable one, of fair proportions, with a *flat* margin, which this bird has wisely contrived to enable him to get comfortably out and in; for the circular part of it, where the three eggs are deposited, is barely sufficient to contain them. I have frequently remarked the warmth which the egg so long retains after the Gull has been scared from her nest; and my astonishment was increased on shooting one of the birds to find, on separating the feathers on the under part of the breast and the body, a space about as great as the palm of the hand, completely divested of feathers, exhibiting a skin as fine as silk, and possessing an amount of animal heat which I never could have anticipated.

I am perfectly aware that the practice of denuding themselves of the interior feathers of the breast, to assist in the process of incubation, is common, but how to account for this additional warmth is a difficulty; for I have never before remarked anything to compare with it in other wild birds; and if we could ascertain that the same temperature prevails in the Swan and the Pelican, it might necessarily lead us to suppose that such rapidity of circulation may tend to longevity. It is quite out of my way to speculate on its term of life; but as Cuvier has computed the age of a Whale at one thousand years, might not Owen give us a comparative idea between the age of this bird, and that of other birds whose *span* has already been ascertained.

To furnish you with further evidence of the rapacity of the Herring Gull, my friend Mr. Kemp is in possession of one at the present moment, which we brought along with us from the island of Sanda, in the month of July, 1848, and as my absence from this country prevented me watching *her* as frequently and carefully as I did "Snow," I state to you on this gentleman's authority, that in the summer of 1851, he raised a brood of nine young decoy Ducks, which he took especial care of by keeping them confined within an outhouse in his garden; at the expiration of a few days, he allowed them to get into the garden; when, horrible to tell, "Susey," as he calls the Gull, swallowed the whole *cleckin!* The second brood which he raised consisted of five, four of which, during one forenoon, shared the same fate; and the remaining one she gobbled too, just as Mr. Kemp had fitted up some wicker work for its protection. This Gull has never displayed the tact of the other one, and her performances in Sparrow-catching, have been upon rather a limited scale.

I am afraid it will be rather out of place here to refer to the habits of the (*Larus marinus,*) Great Black-backed Sea-Gull; but the following notes may go so far to support the preceding observations. He has a very doubtful reputation, and although I have shot several specimens, I have never had an opportunity of watching him at such a season as would have enabled one to judge of his taste for the horrible, although I am inclined to look upon him with great suspicion. Two gentlemen of my acquaintance, Mr. Gibb and Mr. Kemp, who spent some time amongst the precipitous cliffs and islands on

the coast of Sutherlandshire, in the month of July, 1850, had an opportunity of seeing many specimens, and were informed by Mr. Mc'Ivor, the Duke of Sutherland's factor, that the Great Black-backs were very *sore* upon the lambs; that they hunted in pairs, and attacked the lambs, which they quickly deprived of sight; and that in the early part of the previous season he had lost thirty. One of these gentlemen having shot a Guillemot from a boat, between the island of Handa and the mainland, was rather taken by surprise to observe a Great Black-back stoop at the quarry, which he immediately began to devour.

During an excursion which I made to Lochlomond, on Thursday, May 20th., I was fortunate enough to discover the nest of the Great Black-back, on a flat marshy island, containing two eggs, which I carried off; this was a very unexpected circumstance, as I have always understood his habits to be more of a solitary nature; he seemed to have fraternized with a colony of about eighty pairs of the Lesser Black-backs, which I scarcely think they considered any compliment; neither do I think his company would be any advantage to another colony of about eight hundred pairs of (*Larus ridibundus*,) the Black-headed Gull, which have squatted only about four hundred yards from him, on the same island. The appearance and situation of the nests of these last-named birds were very picturesque and interesting; they had selected a number of small islets in the centre of the mossy pools, which were literally covered with their nests, containing, on an average, three eggs each.

This bird, till within the last few years, was never known to hatch in Lochlomond, although a specimen was occasionally seen in the district. Such is not the case, however, with the community of the Lesser Black-back; for I was informed that they have bred there for upwards of twenty years. But as I never heard of or saw the Great Black-back breeding in the Loch, I must set this down as his first appearance.

17, *Florence Place, Glasgow, October 22nd.*, 1852.

MARINE ANIMALS.

THE ARGONAUT.

BY O. S. ROUND, ESQ.

(*Continued from Vol. II., page 275.*)

My last paper upon this interesting class of Marine Animals was necessarily confined to general observations upon the formation of the shell, the mode in which it is supposed the animal rises or sinks in the ocean, and the reasons for concluding that the shell is the actual property of the animal, and not, as has been imagined, a shell belonging to some other denizen of the deep, which it parasitically inhabited. I have chosen the term "Argonaut," as

representing this class, although in strictness it is a genus with but one recognised species, namely, the Paper Nautilus, (*Argonauta Argo,*) of Linnæus, because the forms both of that creature, the Pearly Nautilus, (*Nautilus pompilius,*) and the Poulpe, or Cuttle-fish, are so extremely alike, and the mode which they all have of *floating* in the sea, giving them the best title to that appellation, signifying "Lazy sailors." When divested of the shells, their appearance is strikingly similar, and it is in fact essentially the same character of animal in general formation, so far at least as to form together a class—these are generally called "Cephalopods," in consequence of the head being placed between the body and feet, or arms, which appear to proceed from and around it, and are like so many tentacula, or feelers, and the agents whereby some of the class take their prey, and all feed.

The Paper Nautilus is the shell found with the living animal resident within its precincts, and is of a most beautiful construction—white, transparent and ridged, and, like shells of the same character, of a highly cellular structure. It is found in abundance in the Mediterranean, and M. Sander Rang, in his pretty little work, describes minutely the habits and appearance of these Molluscs. It is from him chiefly we gather the unromantic fact that instead of sailing with outspread *velamina* before the breeze, they propel themselves by forcibly ejecting water from the funnel, which I have before referred to; or creep with their shells upon their backs, after a very inelegant and snail-like manner. Madame Jeannette Power, who kept a number of these beautiful creatures in what we may call a "domestic state," has furnished some most interesting particulars respecting them. For the purposes of science and to clear up, if possible, the *vexata questio,* relative to the actual ownership of the shell, Madame Power broke portions of it, and the very next morning observed a gelatinous secretion covering the orifice, which being deposited from time to time by the creature, the ridges were moulded and sustained in it by the mantle until the substance was complete.

The Pearly Nautilus, (*Nautilus pompilius,*) is far better known by its shell than the Argonauta, but, although there is little doubt that the animal itself is no less common, yet its habits are such, that only one instance has occurred in which the shell has been captured with the Cephalopod within it. This interesting addition to natural science was made by Mr. George Bennett, near the Island of Erromanga, New Hebrides, where the shell was observed floating on the water, having the appearance, as was said by the sailors, of a dead tortoise-shell cat, but at the moment it was approached it began to sink; in the eagerness not to lose so great a prize, it was somewhat hastily seized with a boat-hook, and a part of the shell broken. This, I take it, coupled with the fact of so many shells being constantly met with, and *not* in a fossil state, is sufficient to warrant the supposition advanced above, that the animal, though only in one instance captured, is no less common than the other. This invaluable specimen I have often seen in a state of perfect preservation in spirits, at the Museum of the Royal College of Surgeons. Besides these, the

ocean, in former periods of the world, was evidently peopled by an extensive class of these animals, and several possessing shells, similar to these "Argonautæ." Of these the specimens are chiefly fossil, the ammonites, many of which have been found of an immense size, and there can be little doubt that their habits and interior formation very much resembled that of the Nautilus, the exterior appearance being almost identical. Mr. Thomas Rhymer Jones, in his excellent work, entitled, "A General Outline of the Animal Kingdom," describes the anatomical formation of these animals minutely, but upon this I do not propose to enter, only observing that the structure is elaborate, and will be found in the above work, well worthy the attention of the curious in such matters, illustrated as it is by some very beautiful engravings.

In reference to this subject, it may not be out of place to speak of the bone of the Cuttle-fish, so often picked up by us on the sea-shore—this is what is called the Dorsal plate, and is formed precisely in the same manner as the shell of the Nautilus, namely, one layer being secreted behind another, so that, as I hinted in that case, the age of the animal might be thereby easily determined were we precisely aware of the time taken in secreting one, and supposing the same period occupied in secreting each. When a transverse section is made of this substance, it is found to consist of lamina or layers of a calcareous substance, each being connected and yet divided by an infinite number of spines or minute pillars—a most beautiful object for the microscope; this arrangement renders it, for its bulk, at once tough and light; and this is quite loosely hung in a sac or mantle on the back of the fish or cephalopod, partly to protect and partly to assist its natatory movements.

Before I conclude I must observe a striking distinction between the shells of these animals, namely, that whereas that of the Pearly Nautilus is so beautifully divided, or chambered, a structure which so easily enables the cephalopod to rise or sink, that of the Argo, or Paper Nautilus, exhibits no such divisions, but the animal inhabits the entire shell; but upon sections being made of the extinct Nautili, the Ammonites, the same series of chambers is exhibited as in the Pearly Nautilus, and hence I look upon that species as identical with those found in a fossil state. As I have said before, although the animal has been so rarely found, my conviction is that they are no less common in reality than the Argo, but inhabit such remote parts or depths of the ocean as to render their capture almost impossible, and that probably they are seldom at the surface, but sport in a moderate medium of the waters, for which the great strength of the shell would likewise the better qualify them, and hence the ejection or imbibing of water would be equally necessary and useful. That the Argo imbibes and ejects the briny fluid on which it sails, M. Sander Rang himself witnessed; but it may likewise be another before unsuggested use of the walls of the chambers found in the shell of the *Nautilus pompilius*, that they give strength to resist the pressure of the water at great depths, whereas the beautiful Argo sports near the coast, and is besides, by entirely filling the shell with its soft pliant body,

which thus presses into every curvature, enabled to resist a great pressure, but oftener sports on the surface.

Who shall say what wonders are yet hidden in the deep ocean, or what provisions are necessary to meet *media* that we know not of? Sure I am that no one rises from the contemplation of any natural production, if he considers it aright, without being a better and a wiser man. It is in these matters that we see palpably the finger of God, who hath done all things well; whether we sail on the sea or traverse the earth, it is the same. When we investigate any of those orders of beings, which move in so different a medium from our own, we are struck with an admiration which no other study can supply, but if we reflect upon it, we shall see that every branch of animated nature possesses equal claims upon our attention; and it is in this way that we should regard it, and not merely taking the novelty of the pursuit for our incentive, look through all these, *His* works, to the Creator, whose ways are in the deep waters, and whose footsteps are not known, and learn to remember the great truth, that nothing was made in vain.

(To be continued.)

A LARK'S NEST.

BY JAMES B. DAVIES, ESQ.

About noon on Sunday, the 2nd. of May, 1852, I was walking by the side of the River Greta, at the back of what was once the abode of poor Southey, when noticing a Ground Lark start from beside my feet, dart across the river, suddenly re-cross at another place, and off again: I naturally concluded from its anxiety that I must be in the vicinity of the modest mansion, where its hope for the season lay as yet unfledged. I was right; for on examining the bank the habitation of the little flutterer was soon detected. It would not be more than four feet from the ground, on as sweet a bank as bird or fairy could wish to build, though not

> "Quite o'ercanopied with lush woodbine,
> With sweet musk roses, and with eglantine"

The hole would be about nine inches in length, and the inner portion considerably sunk and well lined, so as to afford a comfortable bed for the little urchins within. They were two in number, and seemed very young, for not a bit of their puny bodies was covered except the head, which had a coating of blackish down. The bills were large and yellow, and continually gaping, as if they expected some soft nutritious morsel of an insect to drop into them.

Such taste in the choice of a summer retreat I have seldom seen displayed, warm and snug, well covered from the wind, and artfully concealed from the prying looks of puss; with a crystal rivulet making sweet gurgling music almost at its very door, and the lofty Skiddaw, "Queen of the lakes," looking

majestically down in the distance; and add to this, that it was on classic ground. Gracefully along the top and down one side lay a piece of brake, brown with age; over this—as it were to mark the spot and direct her fluttering pinions where to settle—were two rich red ivy leaves, and tall fresh grass stood up on every side, backed by soft silken moss; while before the door was a luxuriant tuft of rose campion, whose fair pink blossom will soon glad the eyes alike of birds and man, and by the time the little inmates have reached a size and age to look about them, they will no doubt enjoy the freshness of its honied flowers, and pick many an insect from its bright corolla. I could not well determine what the lining of the nest was composed of, and it would be wickedness itself to remove the tender creatures for the purpose; it seemed, however, to be moss and the dry leaves of grass.

While I was examining the house and its contents, no doubt the mother watched me narrowly, for on my return, after an absence of not more than two minutes, she sat giving heat to, and security for her helpless charge. No means of escape could be found, the bird was in the hands of the fowler, and yet she looked so confident that the heart must indeed have been hard that could have injured her. It was not the bold confident look of a strong bird, but a confidence, mingled with supplication, so softened her bright eye that I blushed at the half-formed wish to capture her. It may be that in days gone bye, kind-hearted Southey watched and loved that little bird, and even that thought, without the creature's tender look—which seemed to say, you have just been at church, if you have learned your lesson aright there, you will protect, not injure me—was strong enough to stay the hand even of a "Naturalist who wanted a specimen."

Greta Hall, Keswick, May 5th., 1852.

Miscellaneous Notices.

A singular Calf.—October 1st.—Visiting my friend, John Collins, of this town, (who is a most excellent preserver of birds and animals,) he showed me a Calf, which he had just stuffed, with two complete and full-sized heads; but what was most remarkable the heads were connected together at the throat, the lower jaws being flatwise to each other; consequently, when erect, the heads were sidewise; there was also a hump upon the shoulders; the fore legs were crossed with the hoofs turning upwards; the body was of the ordinary size. It was calved early in September, and is the property of a farmer at Shearsby, in Leicestershire.—T. Turner, Friars, Leicester, November 12th., 1852.

Curious habit of a Hedgehog, (Erinaceus Europœus.)—About seven years ago, at the residence of a relative of mine, in this city, a Hedgehog was kept for the purpose of destroying slugs, snails, etc., in the long, narrow, walled garden behind the house. His usual haunt, during the sleepy hours of day, was either a wood-house, to which he had access, or the covert afforded by some ivy at the bottom of the garden. This Hedgehog, (as far as my memory serves me,) differed in no remarkable manner from his spiny brethren, as far as external appearance was concerned; and, had it not been for one remarkable habit, might have long since passed from my memory. But, in order to give my readers a clear idea of what I am about to relate, I must briefly describe the garden.—It was, as I have said, like most town gardens, rather long and narrow, with a path down the middle; this path was flanked on each

side by flower-beds alternately round and oblong, with luxuriant borders of cushion pink. Not long after Hodge had been naturalized in this retreat a beaten path was found across one of the oblong beds, about four feet from the end; while the track of some animal was plainly visible on the path which went round the farther side of the circular bed, which came next it. This excited some surprise, but a little observation soon discovered the cause, though only to render the surprise greater. It was found that, as regularly as the evening set in, Hodge was to be seen running round and round, with a swift and steady pace, exactly in the track which he had beaten out, and never in any other. The oddity of the circumstance often drew spectators, but for them he cared not a pin, if they only kept out of his way. I once had the pleasure of witnessing this nocturnal exercise. It was quite ludicrous to see his grave, steady air as he emerged from under the cushion pinks of the circular bed, trotted up the middle path close under the border, came in full view as he crossed the oblong bed, and dived out of sight behind the opposite border, to appear again in a few moments. If uninterrupted he generally kept on a good while without pausing. All who witnessed his circumambulations were quite at a loss to give a satisfactory reason for them, though several (myself among the rest,) puzzled over the subject a good deal. If it were merely for *exercise*, why choose that particular spot, and always keep to it? and why should he strike out a path *across* the oblong bed, instead of keeping to that which went round the circular one? Be this as it may, the sport, if sport it were, was kept up with commendable punctuality for some weeks, as long, I believe, as Hodge remained there. His object in running this eternal round still remains a mystery; but if any wiser heads have met with any thing similar, and are prepared with an explanation, they would do well to give it in the pages of "The Naturalist."—Henry Ferris, Kingsdown, Bristol.

The Sparrow, (Passer domesticus.)--In the October Number of "The Naturalist," page 221, I observe a paragraph by a correspondent, on the Nesting of the Common House Sparrow, in which he asks if the Sparrows mentioned in a communication by me, in "The Naturalist," for February, 1852, page 36, were not mistaken by me for the Tree Sparrow, (*Passer arboreus*,) by which I suppose he means the (*Passer montanus*.) Now, I am quite sure that they were the ordinary House Sparrow, (*P domesticus*,) and not the (*P. montanus*,) as I fully convinced myself of at the time. It is not at all a rare circumstance for this bird to build in trees near houses; at least in this part of the country. I am not aware of the other species, (*Passer montanus*,) ever having been seen in Scotland; I believe it is a bird of rather local distribution, and never nestles but in trees. When the House Sparrow builds in trees, he constructs his nest in a more compact way than when he lodges under the eaves of houses, or in the thatch of stacks.--J. D., 38, Cumberland Street, Edinburgh, November 5th., 1852.

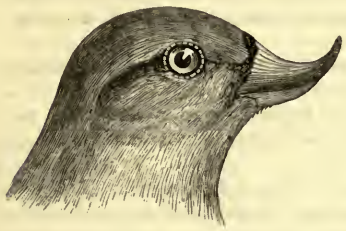
Additional Heronries.--In addition to the already-mentioned Heronries in "The Naturalist," may be added one in "Babingley Wood," near Castle Rising, Norfolk, and one at Cobham Park, Kent.--J. W. Lukis.

"Corvus frugilegus."--In this parish, in one of the Rook-shooting excursions of last month, which your valued correspondent, J. Mc'Intosh, Esq., so feelingly denounces in No. 16 of "The Naturalist," one of the victims was pied, I do not mean *put under the crust*, but partaking of the Magpie's colouring. There was a large white spot in the throat just under the bill, and the three large outside feathers in each wing were pure white. It is a fine male bird, and is preserved.--R. E. Morres, Ashcott, June 3rd., 1852.

"Pyrrhula vulgaris."--I never knew till the other day, while staying with a friend of mine near Glastonbury, that feeding cage-birds with *hemp-seed* produced such a change of colour in their plumage. I was of course aware that birds often died from being too plentifully supplied with this food, but the case I am speaking of struck me as somewhat singular, and may perhaps be interesting to some of your bird-keeping readers. My friend had bred some Bullfinches in a cage, and one fine cock-bird, which was kept by itself, and fed upon scarcely anything but hemp-seed, lived three years; and at the time of its death its plumage, both the beautiful gray of the back and the vermillion of the breast, had become *perfectly black*. It was not the glossy *purple black* of the Rook, but a *dead* inky-looking colour. It is now stuffed, and in company with a few other *quondam* songsters is perched, a curiosity at least, if not an ornament in my friend's drawing-room, where I saw it last month. Is there any other instance on record of so *total* a

departure from the colouring of nature from the same cause? I may add the popular name of the *Pyrrhula vulgaris*, or Bullfinch, in this county (Somerset,) is "Hoop"--Idem.

Hemp-seed, we believe, often causes this change of plumage.—B. R. M.



Malformation in a Covey of Partridges, (Perdix cinerea.)—A friend of mine, shooting near Sherburn, once sprung a covey of Partridges, and succeeded in shooting eight of the young birds, all of which had a singular malformation in the mandibles, similar to the sketch. The old birds escaped, which made it impossible to ascertain whether the singularity was hereditary or not.—JOHN DIXON, Leeds, October 22nd., 1852.

Proceedings of Societies.

Royal Physical Society of Edinburgh.—The Royal Physical Society met in the Institution Rooms, 6, York Place, on Saturday, December 11th., 1852, at two o'clock, p. m.; Mr. Hugh Miller, President, in the chair. The following donations to the library were laid on the table, and thanks voted to their respective donors:—1. "The Transactions of the China Branch of the Royal Asiatic Society for 1848-50," per Dr. Coldstream. 2. Dr. Johnstone's "Flora of Berwick-upon-Tweed," from the author, per R. F. Logan, Esq.

I. The first communication was a notice of the Bridled Guillemot, *(Uria lacrymans,)* Temm., shot near Berwick; by John Alexander Smith, M. D. Dr. Smith considered *U. lacrymans* to be a distinct species; and went into the subject at some length. Mr. Logan considered it merely a variety of *U. troile*, and stated that he had in his hand a paper by Mr. John Wolley, who considered it only the young of *U. troile*.

II. The REV. JOHN FLEMING, D. D., next exhibited a recent specimen of the Little Auk, or Common Rotche, *(Alca alle,)* Linn., in its winter plumage, which had been kindly sent to him by the Rev. Mr. Cunningham, of Prestonpans, near which place it had been taken in an exhausted state by some fishermen. DR. JOHN ALEXANDER SMITH mentioned that another specimen of this bird had been shot in the Frith, off Dalmeney Park during the severe frosty weather we had about a month ago.

III. A number of interesting specimens of Snakes, Insects, etc., which had been collected by the REV. H. M. WADDELL, at the Mission of Old Calabar, were next exhibited. Mr. Waddell had for some time been stationed there as a missionary for the United Presbyterian Church, and on his recent return to this country he had brought with him the specimens in question. These he had liberally divided among some of the naturalists in this city, in order that they might be examined, identified, and exhibited to the Society.

Among the objects shown, MR. JAMES CUNNINGHAM, W. S., (on behalf of Dr. Coldstream, who was unavoidably absent,) exhibited a specimen of the very curious *Arachnidan Phrynus Lunatus* of Olivier, Latreille, etc. It belongs to the tribe of *Solifugæ* (*Tarentulidæ*,) and is supposed to be very poisonous. Mr. Waddell stated that this was the only specimen of the kind he had ever met with, and that it had been found in an outhouse among some lumber.

DR. LOWE next reported on one or two species of *Myriapoda*,—one of which was a very large species of *Iulus*, in which, from its size, the peculiar characters of the genus were very distinctly seen In connexion with this he gave some very interesting information as to the habits of one of the British Species which he had himself watched.

MR. ANDREW MURRAY, W. S., to whom the Beetles had mostly fallen, exhibited them, and reported that the principal species were *Augosoma Centaurus*, Fab. male and female, *Oryctes Monoceros*, Oliv., and *Diplognatha Gagates*, Fab. There was also a species of *Oryctes*, which was probably undescribed, and which at least was not in the collection of the British Museum, to which he had sent it for identification. The Beetles shown were all of large size and sombre colours.

MR. R. F. LOGAN described eight of the insects:—two gigantic spiders, one of them belonging to the family *Mygalidæ;* and, after alluding to the fabled bird-catching propensities of the genus *Mygale*, completely disproved by their habits, read an extract from the proceedings of

the Entomological Society, which went very far to prove that there actually exists in India a bird-catching spider, little inferior in dimensions to the *Mygale Avicularia*, but belonging to another division of the order, and probably a gigantic species of *Epeira*. Among the other insects was a beautiful *Mantis*, and a *Coleopterous Lamellicorn Larva*, three inches in length, and one in breadth, of a dark olive-colour, clothed anteriorly with reddish brown hairs, and with very distinct black spiracles.

It was then mentioned that the Snakes were in the course of being examined by Professor Traill, and would probably form the subject of a future communication.

The cordial thanks of the Society were given to Mr. Waddell for the interest he thus exhibited in the promotion of science, and for the kind and handsome manner in which he had presented his collection to the members.

IV. A variety of living land shells were then shown. They had been collected by Dr. Knapp last summer, during an excursion in Switzerland, and he had brought them home and kept them since alive in the glass globe in which they were exhibited. Dr. Greville enumerated the species which were shown, and gave some interesting details relating to them. The thanks of the Society were voted to Dr. Knapp for the exhibition.

V. A Serpent from the Amatola, Kaffirland, and supposed to be identical with the Egyptian Cobra, or Asp, was exhibited through the kindness of the Rev. A. Somerville, and excited much interest, the fangs being fully displayed, and having the poison condensed around their orifices.

VI. An interesting paper was then read on the injurious effects of cedar wood drawers, by Professor Fleming. In a conversation which followed the reading of Dr. Fleming's paper, for which he received the thanks of the Society, it was stated by Mr. John Stewart, in confirmation of the view taken, regarding the pernicious effects of cedar wood on Natural History specimens and works of art and vertu, that, having committed to the keeping of a cedar wood drawer a set of delicate photographs, he found, on examining them after the lapse of some time, that they had almost all suffered, and that from most of them the images were wholly effaced.

VII. Note on *Helix Aspersa*, by Mr. Hugh Miller.

At the conclusion of the meeting, James Wilson, Esq., Woodville; William Brown, Esq., F. R. C. S. E., Dublin Street; and John William Hadden, Esq. from Van Dieman's Land, were elected members of the Society; and the following gentlemen were unanimously chosen office-bearers for the ensuing year:—

Presidents.—John Coldstream, Esq., M. D., F. R. C. P.; Hugh Miller, Esq.; Rev. John Fleming, D. D., Professor of Natural Science, New College, Edinburgh.

Council.—James Cunningham Esq., W. S.; Robert K Greville, L. L. D.; Robert Chambers, Esq.; William H. Lowe, Esq., M. D.; Charles Maclaren, Esq.; and Andrew Murray, Esq., W. S.

Treasurer.—William Oliphant, Esq. *Secretary.*—John Alexander Smith, Esq., M. D. *Assistant Secretary.*—George Lawson, Esq. *Honorary Librarian.*—Robert F. Logan, Esq. *Library Committee.*—William Rhind, Esq.; John Murray, Esq., M. D.; and Patrick Dalmahoy, Esq. W. S.

Natural History Society of Glasgow.—This Society held its usual monthly meeting in the Library of Anderson's University, on Tuesday evening, November 2nd. William Gourlie, Esq., President, occupied the chair.

Mr. John Gray exhibited an extremely beautiful and fresh male specimen of *Colias Edusa* from the vicinity of Largs, captured on the 12th. of September, 1852; thus proving its geographical range to extend much farther north than had hitherto been supposed, and forming at the same time a very interesting addition to the Scottish Fauna. He also exhibited a fine reared specimen of *Drepana falcataria*, from Fifeshire.

Mr. Robert Gray read a very interesting letter from H. D. Graham, Esq, of Iona, containing additional observations on the habits of the Stormy Petrel, and also an account of some of the quadrupeds found on the island.

An extensive series of beautifully-coloured ornithological drawings, the property of Mr. R. Gray, and executed by Mr. William Sinclair, a young artist of great promise, was exhibited. Most of the portraits were exceedingly characteristic, and remarkable for originality of design, and their truthfulness to nature. Mr. Robert Gray also exhibited a collection of skins of

birds, shot in the neighbourhood of Dunbar, by Mr. Sinclair, and prepared by him for cabinet specimens, in a style seldom equalled.

Mr. George Donaldson exhibited two specimens of the Common Yellow-hammer, (*Emberiza citrinella*,) remarkable varieties, entirely of a pure yellow, except the quill feathers, which were pure white. These birds were killed in the isle of Gometra.

Mr. Roger Hennedy then read the following remarks upon the Algæ developed on the House-fly:—"Some excuse might be considered necessary in introducing to your notice the present plant, as, coming after Mr. Napier's observations, it may appear obtrusive; but when we consider the plentiful appearance of the fly, with its accompanying parasite, during the end of summer and autumn, and its nature not being generally known, I have been induced to bring the following remarks before you. To describe the difference betwixt Algæ and Fungi is rather a difficult task, although the mere tyro can generally distinguish the one from the other in the fields. Fungi may be described as aerial plants, seldom or never being found growing in water, and are almost universally developed on decaying animal and vegetable substances. On the other hand, Algæ are always found in liquids, or in moist places; in the sea, they are found growing on rocks, shells, or parasitically upon members of their own family. The present plant from its definition—if definition it can be called, bears an anomalous position, partaking of both characters; in it we have a development on animal substances, being found upon dead flies, and live gold fish in water, and upon the former as an aerial plant. If it belongs to the Fungi, its great peculiarity consists in bearing zoospores, which none of this class have been known to do. In most of the lowest forms of Algæ we find this mode of reproduction. Good specimens of this plant may be procured by putting newly-killed flies in water, and allowing them to remain for a few days."

Here Mr. Hennedy described the plant as developed upon the fly as it clings to the wall; he stated that in that position the plant makes its appearance between the rings of the abdomen, which are then very much swollen. He then went on to detail the mode of development on a fly immersed in water, with the time necessary to perfect the growth of the plant; the following is his own description of his experiment:—"On Thursday evening October 7th., at five o'clock, I put a fly, newly-killed, in some water, in which some oscillatorias were growing; on the next evening, Friday, there was no appearance of any plant, but on Saturday evening at the same hour, five o'clock, the plant was grown larger than ever I had seen it when developed as an aerial specimen—it gave the fly quite a woolly appearance. By Monday it had grown fully longer in proportion to the fly, than the one drawn on the board; on Tuesday it was sent to a friend, but before doing so, I tried if another fly in the same water, inoculated with the old plant, would produce it any quicker; this done, at the same time I took some of the Glasgow water fresh drawn from the pipe; and immersed in it another fly; this was Tuesday evening, October 12th., at five o'clock. On Wednesday, at eight o'clock, visible signs of milky points protruding from the body of the fly were perfectly visible. On Thursday evening the plant was well-grown, thus taking two days to perfect its growth. While all this was going on, no appearance of vegetation was visible on the fly in the pure water; in three days growth had commenced—visible in the morning at half-past eight o'clock, but by eight o'clock in the evening the plant was well-grown. Of its quickness of growth, it is mentioned in an article "On the Escape of the Zoospores of Algæ," in the French Annals of Natural Science, that a visible growth takes place even during the short time they are under the microscope for examination. The following are the names by which this plant is known:—*Saprolegnia ferax*, Kutz; *Vaucheria aquatica*, Lyng; *Achlya prolifera*, *Saprolegnia muscorum*, Nees; *Leptomitus clavatus*, Ag."

Mr. David Robertson was elected a resident member.

The Retrospect.

We are induced, after some consideration, to open a portion of our pages under the above title, for the examination of previous articles in "The Naturalist," more particularly with a view to the correction of any errors or mistakes which may have been promulgated in them. We anticipate much benefit from such articles, and only request that in *no case* may anything approaching to *personality* be introduced; by observing this rule, the ends of science will be

equally advanced, and the feelings of individuals will be spared. By a reference to "The Retrospect," the unintentionally incorrect statements which even with the greatest care, sometimes occur, will be at once apparent, and we can easily, by drawing a pen through the erroneous sentence, prevent the perpetuation of error. The knowledge too of the existence of a "Retrospect" will tend to the prevention of error, by inducing increased care in sifting the evidence of facts to be recorded.—B. R. M.

The Short Sun-fish, (Orthagoriscus Mola.)—A notice having appeared in "The Naturalist" vol. ii. page 280, of the capture, off Portlethen, a small fishing-village a few miles south of Aberdeen, of the "*Orthagoriscus truncatus*," I am induced to correct a few mistakes in that account. The fish was caught on Friday the 17th. of September last, and on the following day, was conveyed to Aberdeen by its captors, for the purpose of exhibition, when I visited it in company with the Rev. Mr. Longmuir, who thoroughly examined it, and ascertained its dimensions and weight. On consulting "Yarrell's British Fishes" a short time after, there was not the slightest difficulty in determining the species to be *Orthagoriscus Mola*, and not *O. truncatus*, as the former of the figures of the fish in that work presented a perfect resemblance to the Portlethen specimen. The Rev. L. Jenyns, in his excellent "Manual," distinguishes *this* from the only other British species, in the depth being only two-thirds of the length, and in the skin being rough, which was very much the case when the specimen was fresh. The flesh is said to be bad, but a considerable quantity of oil is generally yielded. According to the last-mentioned writer, the skin of the other species, the true *O. truncatus*, is smooth, and the length is much greater than the depth. This last has only been met with in a *very few* instances on the British shores. The measurement of the breadth is also incorrectly stated in the former account; the distance five feet two inches, having been taken from the extremity of the one fin to that of the other, not "from below them."—John Longmuir, Jun., Aberdeen, December 7th., 1852.

Obituary.

Mr. J. F. Stephens.—Entomologists, and especially those attached to the study of English insects, will learn with sorrow that Mr. James Francis Stephens, F. L. S., late President of the Entomological Society, died on the 22nd of December, at his house in Kennington, after eight or ten days illness of inflammation of the lungs. Mr. Stephens was for many years a clerk in the Admiralty office, in Somerset House; having lately been superannuated. For the last half-century, he has devoted the whole of his leisure to the study of Natural History; and he had formed the largest collection of British insects which had ever been collected together. Indeed the extent and beauty of its arrangement won the admiration of every foreign collector who saw it, as such local collections are almost unknown on the continent. This collection has for years been, in the most liberal manner, open one evening in the week, (Wednesday,) to any person who wished to consult it for scientific purposes; and the very complete entomological library which Mr. Stephens had collected was equally accessible. In 1818, on the recommendation of Dr. Leach, and at the request of the trustees, the government gave Mr. Stephens permission to leave his office for a time and to assist Dr. Leach in the arrangement of the insects in the British Museum collection; then forming the commencement of the collection of British insects in that institution. Mr. Stephens was the author of:—First, "The Systematic Catalogue of British Insects;" Second, "The Illustrations of British Entomology;" Third, "A Manual of British Coleoptera;" Fourth, "A Catalogue of British Lepidoptera in the Collection of the British Museum;" the last part of which was occupying his attention at the time of his death. He was also author of the "Continuation of Shaw's Zoology;" containing the birds, which first made the English naturalist acquainted with the modern system of classification now universally adopted. Mr. Stephens was a most active collector in the field, and combined in an extraordinary degree the practical experience of the field naturalist with the knowledge of the enlightened student and scientific reader.—From the Athenæum, December 25th., 1852., J. Mc'Intosh.

BRITISH MUSEUM NATURAL HISTORY

LETTERS OF AN ORNITHOLOGIST.

(Continued from page 27.)

Letter IV.

Iona, January, 1852.

On the 9th. of this month, besides a most terrific gale of wind, we also had a very heavy fall of snow. I ventured out for a short time, in hopes of meeting some "straggler." Numerous flocks of Snow Buntings, (*Plectrophanes nivalis,*) were cowering among the stubbles, the males in beautiful white plumage: this Bunting is only a rare visitor to our island. As I was returning home, my dog chased what I thought was a large Rat, for some little distance over the snow; he brought it to me unhurt, and it proved to be a Water-rail, (*Rallus aquaticus,*) the first I have seen here. It has lived ever since in a box, feeding on chopped meat, which it will take freely from the hand; indeed it is so tame that it has already become an item in the family group, and when released from its box, it stalks about the hearth-rug without making the least effort to escape.

The Manx Shearwater, (*Puffinus anglorum,*) is common to these islands, and appears in summer. At that time we frequently see them skimming rapidly over the crests of the waves with a rapid, Swallow-like flight. They are rarely seen to alight, and are so swift and restless, and only to be met with on the open sea, that it is not easy to procure many specimens. On the 12th. of May last year, however, a very calm day, as I was going to Staffa with a party in a boat, we approached a number of very large flocks of Shearwaters *swimming* upon the water. They were very tame, and I procured a considerable number. At their first appearance I mistook them for the Common Guillemots which at that time of the year "stud the seas." By their arriving here in such large flocks at the time of migration, and their being seen here during the whole summer, it is natural to suppose that they breed in the neighbourhood, and in fact I got an egg at Staffa which, I have no doubt, is one of theirs. It was in a hole in a grassy bank upon the summit of one of the basaltic cliffs overhanging the sea. It was past the breeding-time, and a few fragments of shells of eggs that had been hatched were strewed about the ground, and attracted our attention; and we discovered one egg, (an addled one,) by itself in the hole. It was about the size of a Pigeon's egg, white, and a perfect oval, being equally blunt at both ends. The shell had the dead, unpolished appearance which characterizes the egg of the Puffin, Stormy Petrel, and Cormorant. I searched this bank again last season, but in all my egg-hunting tours I never met with another. There were Puffins breeding in the neighbourhood, but their egg is as large as a Common Hen's egg, and of a rounder shape. I have no doubt the Shearwater breeds at St. Kilda, and probably at many of the other Hebrides.

I fell in with two specimens of the Bridled Guillemot, (*Uria lachrymans,*) last year, both early in the spring, when the Common Guillemots were beginning to arrive. I shall keep a sharp look out for them at the same

season this year. I met a gentleman last summer who had visited Barra, and he said that he found this bird breeding there, and the natives were well acquainted with it.

The Golden Eyes, (*Clangula vulgaris,*) are plentiful all winter, especially in a fresh-water Loch, at a small distance in Mull.

The Eider Duck, (*Somateria mollissima,*) is very frequently seen, though generally females and immature birds; at the neighbouring island of Colonsay they breed in great numbers. They abound there to such an extent, that the bird is known by no other name upon these coasts but the Colonsay Duck. The Shieldrake, (*Tadorna vulpanser,*) is equally abundant; and in a visit that I paid to that island, May of last year, I got as many specimens as I wished.

The Black Guillemot, (*Uria Grylle,*) is the commonest bird we have, next to the Gulls; it is an interesting little bird, from the various states of its plumage. It breeds in great numbers upon the isles; and we have reared its young, though they always fly away when full grown; yet they and young Puffins become very familiar.

I am afraid I can add nothing to your knowledge of Plovers; they are not abundant. A few Peewits, (*Vanellus cristatus,*) breed on the island. The Golden Plover only visits the shores in frosty weather, but they are very abundant on the moors in Mull, and still more so at the island of Tiree. The Ringed Plover, (*Charadrius hiaticula,*) is common. There are some patches of gravelly beach which are always frequented by considerable flocks, especially at ebb-tide; or at high-water they will be found in some particular spots among the low sand-hills in the immediate neighbourhood; but they never seem to stray far from these favourite grounds and roosting-places. Upon the approach of an intruder, they commence their wild, plaintive whistle, at the same time running away before him; sometimes one will conceal himself behind a bunch of cast sea-weed or a stone, till the near approach of danger sets him running off to overtake his companions. Thus they will go on, always hurrying across the patches of white sand, and lingering upon the portions of gravel, as they well know that on the former they are very conspicuous, while on the latter they are almost invisible. Upon a too near or rapid approach, or any sudden movement, especially levelling a gun, up they all jump, fly out to sea, tack, fly close past their disturber, tack again two or three times, which they all do together with military precision, giving the flock the appearance of changing its colour from white to black, and then from black to white; at last they pitch down upon the beach again, a little farther on. The best shot is when they are alighting, as at all other times they keep very much scattered.

A few Ringed Dotterels remain to breed in the island, at which time their plumage becomes very beautiful, and their bills and legs an intense orange yellow. They apparently fly about a good deal at night, as their whistle may be frequently heard in the dark, and often inland and in places where they are never seen in the day-time.

There is very little difference between the plumage of the Rock Dove, *(Columba livia,)* male, female, and young. When first off the nest, the young Pigeon is of a darker shade of purple, with very little lustre; the adult male, when in full pride of feather, is of a very pale, delicate tint of lavender, and his neck glistens with the hue of the emerald and carbuncle. I suppose that of all domestic animals none are so easily reclaimed as the Pigeon. Though taken fully fledged from the nest, they immediately become reconciled to the Dove-cot, and are as bold and familiar as the other Pigeons, which have been born and bred for many generations back in slavery. How different is the Wild Duck! Though the eggs, taken early from the heathery nest by the loch side, are placed in the barn under the careful bosom of an old chuckling Hen, yet the young brood, though thus ushered into the world in the midst of civilization, from the moment of their extrusion from the egg till their dying day always exhibit their hereditary distrust of man, and retain much of their original wildness; always ready to use their wings in preference to their legs; upon any insult ready to bid a long adieu, and return to their paternal wildnesses; and it is not till the third or fourth generation that they become fully civilized, domestic farm-yard waddlers.

The Skua is a very rare bird about our shores, and I am very little acquainted with it. The fishers seem to know it, however, under the Gaelic name of *Fasqadair*. In an old edition of the "Enclyclopædia Britannica," it is mentioned by the name of "Parasiticus," as very common and breeding at Islay and Jura; but it seems now to have deserted those shores.

The Turnstone, *(Strepsilas interpres,)* is very numerous here: in winter large flocks feed upon the shores at ebb-tide; and during the flood they assemble upon the rocks. They are always to be found upon the little unfrequented rocky islets, wandering about the sea-weed-covered rocks, almost within reach of the wash of the surf. They seem to feed as much in this manner as upon the gravelly beaches. During severe storms they sometimes come a little way inland to the sandy fields. They are generally tame and stand well together, and so give a good shot. Last year I met with flocks as late as the 28th. of May: the birds had nearly acquired their summer plumage. On the 7th. of June the flocks had entirely disappeared, but a few pairs remained in different spots, and these were in most brilliant plumage—very unlike their sombre winter garb; the body covered with a combination of red, black, and white, giving the appearance of tortoise-shell, and the neck and breast curiously marked with black and white. In fact they were in full breeding dress; and I suppose these pairs must have remained here with the intention of nestling in this country.

The mode I generally adopt now to destroy life in birds, whether wounded or not, is by tying a loop in a bit of twine, putting it over the bird's head, suddenly pulling it tight by both ends, and in a few seconds life is extinct with apparently little pain. It is almost the only effectual way of killing some of the stronger sea-fowl, which are remarkably tenacious of life. It does not

hurt the skin, if it is required, as the loop will easily open again, especially if the horse-hair *snooding* of a fish-hook is used. It is certainly a much neater manner than that of knocking the wounded bird's head against the side of the boat, or a stone, which disfigures it very much, and causes the blood to flow so much as to make it disagreeable to carry in the pocket. I have practised it now so long that I lasso my victims with as much paternal kindness as the Grand Signor bowstrings his superannuated ministers.

(To be continued.)

ORNITHOLOGICAL NOTES.

BY TOTTENHAM LEE, ESQ., JUN.

White-tailed Eagle, (Aquila albicilla,) of frequent occurrence. I trapped an old one; and was informed by two or three different people that one of these birds had been seen flying about with a trap, and a long chain on it, affixed to its leg.

Osprey, (Pandion haliaëtus.)—I saw one almost every day for a week at Loch Dee. It always hunted round the Loch, and alighted on large stones.

Peregrine Falcon, (Falco Peregrinus,) is very common here. They build upon high rocks in the vicinity; generally lay three eggs; the common colour is red, but I have twice seen a nest of red and white ones. In a nest containing young I found the beaks of three Snipes and a Cuckoo. On one occasion, when out shooting, one of these birds made a sudden stoop at, and carried off, a Blackcock, which was shot by one of our party; and I have seen another carrying a Curlew as easily as if it had nothing in its talons. They are very fond of Lapwings. A few weeks ago I robbed two Peregrines' nests; one had three eggs, the other two young ones, and I trapped the old bird in the nest with eggs. A curious circumstance occurred within my observation not long ago:—I had set a trap in a Raven's nest, containing six eggs; and on returning to look at it, I found a Peregrine Falcon caught fast. I can hardly assign a reason for its visit; it might have been one of retaliation upon the family; for on a previous occasion I trapped a Carrion Crow in the nest of a Peregrine, with an egg in it.

The Hobby, (Falco subbuteo.)—I am not aware of any instance of this rare bird occurring in Scotland except those specimens which I have seen myself. The first one we got, the keeper knocked down with his stick while it was feeding on a young Grouse: it was a young individual. About a year afterwards the keeper shot another, which was an old bird. I also saw one last summer: it alighted on a wall close to me, so that I could not, even in this third instance, be mistaken with regard to the species.

Merlin, (Falco Æsalon.)—A winter visitor only to this part of the country, but of frequent occurrence.

Goshawk, (Accipiter Palumbarius.)—I have often seen this fine bird flying

about. There was a pair, the summer before last, turned a pair of Ravens out of their nest, and took possession of it. I heard of another nest which was built in a tree.

Sparrow Hawk, (Accipiter nisus.)—On one occasion I climbed a tree to get at a Sparrow Hawk's nest, taking a trap with me to set for the old bird. When I got close up to the nest I saw the female sitting; so I caught it by the tail and pulled it off; but it managed to get away, leaving its tail in my hand. I then set the trap, and next morning caught the tail-less Hawk, though it was only laying.

The following species occur in our neighbourhood:—

Raven, (Corvus corax.)—Breeds here.

Carrion Crow, (Corvus corone.)—Breeds here. When out with my brother one day we found a Carrion Crow's nest, with four eggs, in which my brother set a trap, and at the time he remarked that one of them was singular in its colour. On returning to look at it the Crow was absent, but I climbed the tree to look at the strange egg, and found only three in the nest; so I thought he must have made a mistake in the number. Next day, however, when we went to take up the trap, they were *all* gone: the trap was not sprung, but the Crow having been seen on its nest that morning, we presumed it had shifted its eggs to a place of greater security.

Hooded Crow, (Corvus cornix.)—Permanently resident, and breeds on rocks, like the Raven.

Quail, (Coturnix vulgaris.)

Kingfisher, (Alcedo Ispida.)

Snow Bunting, (Plectrophanes nivalis.)

Brambling, or Mountain Finch, (Fringilla Montifringilla.)

Siskin, (Carduelis spinus.)—A winter visitant, in flocks, and generally found about birch trees.

Mealy Redpole, (Linota canescens.)

Lesser Redpole, (Linota linaria.)

Mountain Linnet, or Twite, (Linota montium.)

Common Crossbill, (Loxia Curvirostra.)—I believe this bird breeds here, although I have never been able to find its nest yet.

Nightjar, (Caprimulgus Europœus.)

Chough, (Fregilus graculus.)—Breeds at Garlieston, Wigtonshire. I took a nest with young ones this year.

Lapwing, (Vanellus cristatus.)—On one occasion my brother and I found a Peewit's nest with three eggs, and tried to blow them; but after making very large holes in them, we discovered that they were within a day or two of being hatched; so we plugged up the ends of one of the eggs with moss, and put it back into the nest. We had got too far with the other one, however, and we took out the young bird; it was quite lively, and seemed ready to come out. We left the place, and had gone a short way only, when we found we had forgot a trap; so we went back for it, and

looked at the nest again. Short though the interval had been, the old birds had taken the prematurely-hatched chick about a yard from the nest and killed it. The other egg was hatched the next day, and the egg we had not touched on the day following. When all the young Peewits had grown up, and a short time before they left us, there was one with pure white wings seen in the same field, and I think it must have been the bird out of the broken egg which we had plugged with moss.

Smew, (Mergus albellus.)—The keeper shot a pair on the river, the winter before last.

Golden-eyed Garrot, (Clangula vulgaris.)—Very common here in the first year's plumage: the adult bird has only occurred once within my observation.

Pin-tailed Duck, (Anas acuta.)—I shot a female this winter.

Glenlee Park, Kircudbrightshire, November, 1852.

THE ROBIN, (*ERYTHACA RUBECULA.*)

TO THE EDITOR OF "THE NATURALIST."

I send you the following interesting account of a Robin, communicated to me by Mrs. Harriet Murchison, of Bicester, Oxfordshire; having her permission to do so. The account was written by that lady's mother, the wife of the late Colonel Alpe, of Hardingham, in Norfolk, at which place the circumstance occurred.—*F. O. Morris, Nafferton Vicarage, Driffield, November 20th.*, 1852.

A few years since, the winter set in very severe with deep snow. It was my custom to open my chamber window every morning as soon as I rose, and leave the door open into the dressing-room, which communicated with it. One morning I perceived, on the top of the door, a Robin, which had entered through the window; after sitting there a short time twittering, he ventured to descend into the dressing-room, and by my great care in avoiding any sudden noise or movement that might alarm him, he soon became so tame as to hop fearlessly about the room. Gradually he approached the fire, and I feared he would fly into it. I watched him narrowly; he first settled on the fender, from thence hopped upon one of the logs of wood within it, where he remained till sufficiently warmed, *turning himself round*, as if to warm every part, and then returned to his amusement of hopping about the room, picking up crumbs, etc.

It is almost incredible how soon and entirely he became perfectly tame. At that time I breakfasted in my dressing-room, and as soon as my breakfast appeared, he hopped on the back of my sofa, from thence to the table, where he helped himself, and once burnt his bill by his curiosity to taste some coffee which was too hot, and appeared, for a few minutes, very angry. He took crumbs from my hand, but preferred helping himself out of the plate, and that with so much assurance and familiarity, that I was fearful

of using a knife lest I should inadvertently injure him. He hopped over the children's feet when they walked across the room, invariably took his station on the sofa, and sung the whole time they were repeating their lessons, but in a much lower and softer tone than the natural wild note of the Robin, which is very loud and powerful for so small a bird. Every day, when one of them who learnt music was practising, he perched upon the cross bar at the top of the desk, which was higher than the music-book, and seemed to enjoy the music.

At length he became so perfectly domesticated, that his presence was almost forgotten by us, and our only care was to avoid treading on him. He frequently perched on my head or shoulders, and constantly on the back of the sofa, close to my elbow. He was much enraged when a looking-glass was placed before him, and pecked so furiously at his imaginary antagonist, that I was sometimes fearful he would injure his bill—sometimes peeping behind it like a kitten. From his first visit to my dressing-room, he never missed a single morning in making his appearance on the top of the door, the moment that the window was opened; he was so punctual to the same hour, that when once or twice this was done later than usual, I have known him peck at the glass on the outside for admission, and when the window was opened, he coolly waited on the outside and flew in directly without being at all alarmed at the noise. He never would *sleep* in the house, but regularly every afternoon, as soon as it drew near his *bed-time*, before which time my door and window were usually shut, he flew against the dressing-room window, and pecked at it till it was opened for him.

I was anxious to know where he passed the nights in such inclement weather, and desiring the servants to watch, I found that he always retired into a large bottle neck which stood in a court adjoining the house. He had by some accident entirely lost the feathers of his tail, and being in good case, was nearly as round as a ball. He did not leave me till the cold weather was over; and during the winter months that he took shelter in my room I never missed him a single day. With the first days of spring he left me, and entirely discontinued his daily visits; but I was not a little surprised to find that the identical Robin, (as we ascertained both by his extraordinary tameness and the loss of his tail,) after having assisted in rearing a young family, made his appearance again in the spring, with four children, *not* at the dressing-room window, where there was scarcely a sufficient resting-place for the young brood, but at the nursery window, which was fronted by a parapet that ran round the house, and where they might rest for a time at a safe distance, and pick up the crumbs thrown to them without running the risk of entering the room.

It is rather singular that *he* should always attend them, and never the mother. At this time he never left them to enter the room, or approached nearer to the window than was necessary to obtain the food which he administered impartially to all. These visits were, however, of course not of long

duration, as the young were soon able to provide for themselves, and the advancing spring furnished them with a plentiful supply of their natural food.

Here, as I supposed, ended our intercourse with this interesting and beautiful little creature; but my surprise was great when about the middle of the *following winter*, and during some severe weather, our little tail-less friend again made his appearance; not, however, with his former confidence and familiarity, but with much more caution, and even alarm, and as if rather to take refuge from the attack of some enemy, than to obtain food, or resume his old habits. He rested for a minute on the door, looking suspiciously around him, then flew down, but soon rose again, and after flying round the room in a hurried manner, endeavoured to hide himself behind the music-stand. In short he appeared so uneasy and alarmed that I opened the window, and he immediately darted out of it. He returned, however occasionally, by his old entrance, but his visits were short, and he was wild and uneasy while with us. After *calling home* in this manner, now and then, for about three weeks, I totally lost him, and never again either saw him or discovered any traces of him, and I greatly fear he fell a victim to one of our numerous cats, as he was seen in the court by the servants two or three times, after he had entirely discontinued his visits to the dressing-room.

It may be asked by what means I could positively ascertain that this *was the same bird* which had visited us the preceding winter. The loss of his tail was a mark of distinction from others, (though I am surprised the feathers had not grown again,) but from the minute observations on his plumage and general appearance, which his familiarity had given me the opportunity of making during a whole winter, I think I could have distinguished him among any number of his species. The tameness of the Robin is almost proverbial; but there was almost a mixture of reason with the instincts of this little animal; and the recollection for so many months of the place where he had been sheltered during the preceding winter, and his return to it at the same period of the following year, are very remarkable circumstances. Had I taken this little bird, and confined him in a cage, I might probably have kept him for years as a tame companion; but I could not be so treacherous as to repay his unbounded confidence in us with the loss of liberty.

A FEW ADDITIONS TO MISS CATLOW'S "ACCOUNT OF THE DIURNAL LEPIDOPTERA OF SUSSEX."

BY W. C. UNWIN, ESQ.

I WAS so much interested with Miss Catlow's pleasing account of the Diurnal Lepidoptera of Sussex, that I have been tempted to place the following additional species, the results of several years personal observation in this neighbourhood, as a supplement to that lady's list. It may be well

to mention that all those named by Miss Catlow are found in the vicinity of Lewes:—

From our being almost surrounded with chalk hills, we possess the greater part of the genus *Polyommatus*. *P. argiolus*, (Azure Blue,) not rare in early spring, settling on the young leaves of the Hawthorn, (*Cratægus Oxyacantha*,) near Mill-Field, Cliffe Hill, and near Kingston. *P. alsus*, (Bedford Blue,) plentiful; little colonies of them on a sunny bank, studded with the beautiful yellow blossoms of *Hippocrepis comosa*, (Horse-shoe Vetch,) at the foot of the Downs. *P. acis*, (Mazarine Blue,) I once had the good fortune to take a single specimen on Hamsey Common. *P. Corydon*, (Chalk-hill Blue,) abundant on Cliffe and Firle Hills about the 10th. and 12th. of August. *P. Argus*, (Silver-studded Blue,) not very common, although some few examples may be found annually in June in "Bible bottom;" and the beautiful little *P. agestis*, (Brown Argus,) is scattered over the less exposed slopes of our Downs sparingly. We have the two brilliant pretty Blues included in Miss Catlow's list, *P. Adonis* and *Alexis*, both in abundance, appearing in June, and a second brood in August. These favourite Downs are well-known localities for *Thymele alveolus*, (the Grizzle Skipper,) *Pamphila sylvanus*, (Large Skipper,) and *P. comma*, (Pearl Skipper;) this last-named insect, although abundant in one particular spot, is not generally distributed here. It is stated by Miss Jermyn, in her "Vade-mecum," as being plentiful in this same locality.

In this long valley, called Ox-settle, at the base of that classical promontary, Mount Caburn, we frequently meet with the rare *Colias Hyale*, (Pale Clouded Yellow;) and although a periodical visitor, is not, as was supposed, septennial in its appearance: examples having been taken for two or three successive seasons, and for the same period none have been observed. I well remember the first time I beheld this comparatively rare Butterfly on the 22nd. of August, 1842. What a discovery I had made, and what an addition to our local list! It was flying in considerable numbers over a large piece of Clover, (*Trifolium pratense*,) on the Downs between the villages of Rodmill and Rottingdean, and was even more numerous on that occasion than its congener, *C. Edusa*, (Clouded Yellow.) In the autumn of 1851, a friend captured several examples in the same district, and also nearer Brighton.

Colias Edusa may be said to be a tolerably common insect in this neighbourhood; and in fact generally along the coast on the extremity of the Downs, between Newhaven and Worthing, appearing annually more or less. During the fine autumn of 1845 it was unusually abundant, and fine specimens were taken as late as November 4th. and 5th: it was very plentiful again in 1847.

If we proceed in a northerly direction from hence in our rambles, we shall soon come to a favourite oak wood, the Plasket, a very productive spot for the entomologist or botanist. It is here where the beautifully-tessellated *Hamearis Lucina*, (Duke of Burgundy,) is seen, and not of rare occurrence; also the sober-coloured *Thecla quercus*, (Purple Hair Streak,) circling round

the tall oaks, baffling the attempts oftentimes of the most ardent and persevering collector. Should this wood be visited in July you will occasionally catch a glimpse of the Emperor, (*Apatura Iris*,) as he glides down the avenues far above the reach of his pursuer: he ascends to a greater elevation than any other insect. Here, too, in the moist and more open parts, *Pamphila linea*, (Small Skipper,) is not uncommon, flitting in the bright sunshine of a July afternoon. In a lane skirting the wood, I have found its allied species, *Thymele Tages*, (Dingy Skipper,) appearing in May.

On the western range of the Downs, I have experienced the pleasure of capturing *Melitæa Silene*, (Small Pearl-bordered,) in any quantity I could have wished, among a patch of furze, and in the vicinity of this locality I have taken an occasional straggler of *M. Artemis*, (The Greasy.) Near Poynings Common this species is abundant.

Thecla betulæ, (Brown Hairstreak,) one specimen was taken a few years ago by a friend, near the village of Newark, and which is now in his cabinet; and I recollect seeing two examples at the Holmbush, in 1849, but they evaded my net, to my great disappointment.

St. Anns, Lewes, November 10th., 1852.

BOTANICAL REMINISCENCES; WITH A FEW WORDS ON THE NATURAL HISTORY OF BANFFSHIRE.

BY JOHN ROSE, ESQ., M. A., M. D.,

Member of the Royal College of Surgeons of Edinburgh, Fellow of the Botanical Society of London, and Assistant Surgeon R. N.

It may not be generally known that there are few localities, at least in Scotland, so interesting to the naturalist as Banffshire. To the geologist it presents a rich field in its treasures of Fossil Fishes in the Old Red Sandstone in the parish of Gamrie, about seven miles eastward of the town of Banff. There *Ichthyolites* were first discovered, about eighteen years ago, by James Christie, Esq., Solicitor in Banff, and William Dockar, Esq., Findon, the name of the farm on which the Fish-beds occur. The locality has since been visited by many naturalists, and accurate descriptions of the various species written by Agassiz, Hugh Miller, and the venerable and learned Dr. John Fleming, Professor of Natural Science in the New College, Edinburgh. The nodules, in which the organisms are contained, are composed of carbonate of lime, and are frequently of a subcrystalline, radiating, and fibrous structure. They are embedded in blue Clay, over the Old Red Sandstone, and are found in a sort of ravine only a few feet above the level of the sea. Species of the following families have been discovered:—*Pterichthys, Cocosteus, Dipterus, Osteolepis, etc.*, of which last, some of the remains are very beautiful, perfect, and distinct, and vary in length from five to fourteen inches. Several vegetable remains of much interest are likewise found in the same locality. Again,

seven miles to the west of Banff we have the famous Portsoy minerals, Serpentine, Graphic Granite, etc., while in the upper districts of the county there are valuable Manganese mines.

The Flora of Banff is particularly rich. We have the beautiful and interesting *Linnæa borealis*, a favourite plant with most botanists, even with those who would depreciate the merits of the illustrious Swede. This occurs in the woods of Monteoffer, near Banff, and forms a beautiful green carpet of many yards in circumference, presenting, when in flower, a scene of natural beauty and splendour truly gratifying to the botanist; so extensive indeed is the station, that here, as in Switzerland, the wood is filled with its fragrance, while the eye is charmed with the verdure of its elegant leaflets, and the modest bloom of its pendulous and beauteous flowers. It is worthy of note that it here occurs occasionally with *three* and *four* flowers on a peduncle, and not always with *two*, as is generally supposed, and denoted by its English name. The late lamented Dr. Mc'Gillivray, of Aberdeen, informed me, in 1846, that he had discovered the same *lusus naturæ* in a beautiful station of the *Linnæa*, in the woods of Fintray, Aberdeenshire. I may mention that I have found the *Linnæa* in the following places near Banff, which, I think, must be regarded as the head-quarters of this lovely plant in Scotland, namely, woods of Craigston, Auchterless, Alvah, and Botriptmie, in which last locality it is associated with the still rarer *Pyrola uniflora*. *Pyrola minor* and *media* occur pretty frequently in old fir woods in Banffshire, along with the elegant *Trientalis Europœa*, so rare in England, and as yet unknown in Ireland.

Along the banks of the Deveron, and in the extensive woods of the Earl of Fife, many interesting plants are found, such as *Geranium pratense* and *sylvaticum*, *Hypericum hirsutum*, *pulchrum*, and *humifusum*, *Veronica montana*, *Veronica scutellata*, of which last I have found a hairy variety, not yet described, as far as I am aware, as well as a stalked variety of the beautiful though common *Veronica Chamœdrys; Cardamine amara*, *Lysimachia nemorum*, *Chrysosplenium oppositifolium* and *alternifolium*, *Paris quadrifolia*, *Trollius Europœus*, *Circœa lutetiana*, and many others, which recur to me with the freshness of yesterday, but which the limits of this paper prevent me enumerating. Along the coast, on the cliffs of Melrose, overhanging the Moray Firth, we have found *Rhodiola rosea*, *Saxifraga oppositifolia*, and *hypnoides*, generally supposed to be confined to alpine districts, but here found a few feet above the level of the sea. In the glen of Auchmedden, close to the sea-shore, we have a great variety of plants, many species of Grasses and Carices, of which *Melica uniflora* and *Carex elongata* are the rarest.

Among Ferns found here, I may mention *Scolopendrium vulgare*, *Aspidium lobatum*, *Adiantum capillus Veneris*, *Asplenium Trichomanes*, *Polypodium Phegopteris* and *Dryopteris*. Along the Banffshire coast is also found the *Scilla verna* in considerable quantity, and in several stations *Primula veris* is also seen occasionally in pastures near the sea, but is very local. Between Banff and Portsoy, in marshes near the sea, we have found the beautiful *Anagallis*

tenella growing along with the no less elegant *Parnassia palustris*, while not far off, among the sandy knolls, you find *Astragalus hypoglottis*, *Draba incana* *Thalictrum minus*, *Orchis mascula*, *Botrychium lunaria*.

"Among the loose and arid sands
The humble *Arenaria* creeps;
Slowly the Purple Star expands,
But soon within its calyx sleeps;

And those small bells so lightly rayed
With young Aurora's rosy hue,
Are to the noontide sun displayed,
But shut their plaits against the dew;

Unlike *Silene*, who declines
The garish noontide's blazing light;
But when the evening crescent shines
Gives all her sweetness to the night.

Thus in each flower and simple bell
That in our path untrodden lie,
Are sweet remembrancers, who tell
How fast their winged moments fly."

Lithospermum maritimum and *Cakile maritima* are frequent along the coast, while in a salt-marsh near Portsoy you may find *Aster tripolium* flowering about the end of September. Near Bogne Castle I have found *Agrimonia eupatoria*, *Cynoglossum officinale*, *Lithospermum officinale*, and *Viola odorata*, apparently indigenous, at all events quite naturalized. The above is but a meagre outline, and only, as it were, a specimen of the Treasures of Flora found in Banffshire, which also presents a fair field for those who are fond of the study of shells, insects, and birds.

"Most persons," says a favourite writer, "are fond of wild flowers, which often possess a charm greater than that of the richest denizens of the garden. These, in their artificial splendour, seem boldly to challenge your admiration, whereas the others retire modestly away, and seek to conceal themselves behind some bush, or brake, or rude stone fence, or bank, or rock, from the gaze of man. If you would enjoy their sweetness, you must search for them; and pleasant is that search. You light upon them as upon so many new stars, beautifying and rendering fragrant the face of earth.

"Ye wild flowers! the gardens eclipse you, 'tis true,
Yet wildings of nature, I doat upon you,
For ye waft me to summers of old,
When the earth teemed around me with fairy delight,
And when daisies and buttercups gladdened my sight,
Like treasures of silver and gold.

I love you for lulling me back into dreams
Of the blue Highland mountains and echoing streams,
And of broken glades breathing their balm;
While the deer was seen glaneing in sunshine remote,
And the deep mellow coo of the wood-pigeon's note
Made music that sweetened the calm.

Not a pastoral song has a pleasanter tune
Than ye speak to my heart, little wildings of June;
Of old ruinous castles ye tell;
When I thought it delightful your beauties to find,
When the magic of nature first breathed on my mind,
And your blossoms were part of the spell."

November, 1852.

A BOTANICAL STROLL FROM CAMBRIDGE TO THE CHERRY-HINTON CHALK-PITS ON THE 1st. OF NOVEMBER.

BY H. C. STUART, ESQ.

The peculiar mildness of the present season has yet preserved some few plants in flower to engage the interest of the passing botanist. It is not often the 1st. of November is chosen for a botanical ramble; nor is it often that the 1st. of November presents so many specimens in bloom as those which compose the following list. Accompanied by a friend, who assisted me in arranging the collection in the following order, we found these plants in flower. They may interest some of your readers:—

In the lane leading out of Cambridge, *Ballota nigra, Sisymbrium officinale, Lamium album, Geranium molle, Lamium purpureum, Veronica montana, Lapsana communis, Papaver Rhœas, Geranium dissectum, Senecio vulgaris, Cerastium viscosum.* In a cultivated field beyond, *Myosotis arvensis, Stellaria media, Linaria spuria, Euphorbia Peplis, Linaria Elatine, Myosotis versicolor, Plantago lanceolata, Reseda lutea, Euphorbia exigua, Veronica Buxbaumii.* On the Railway bank, *Ranunculus bulbosus, Achillœa millefolium, Senebiera coronopus, Trifolium pratense, Anagallis arvensis, Papaver Argemone, Polygonum convolvulus, Pastinaca sativa, Viola tricolor, Bellis perennis, Galeopsis tetrahit.* On the bank of the stream, *Leontodon taraxacum, Spirœa Ulmaria.* In the Chalk Pits, *Ranunculus acris, Verbena officinalis, Geranium Robertianum, Calamintha officinalis, Artemisia vulgaris, Verbascum Thapsus, Senecio Jacobœa.*

In this place I may state that a stream flowing rapidly over a chalky bed adds an interest to the scene. It is at a great distance from the Cam; nevertheless in it we perceived that extraordinary weed, the *Anacharis alsinastrum.* How it got there would be a tedious and I expect an impossible problem. It seems to possess the attribute of ubiquity: at any rate, of being found just where one would least expect to see it. The fertile plant has alone been found; but this fact only adds to the mystery of its enormous increase, and to the singularity of its being seen in waters entirely remote from one another. The idea of water-birds carrying the roots from one place to another is a mere possibility—a strong improbability. Any one who has obtained specimens will recollect how tenacious the roots were to the soil, and to one another; and how hard they strove to remain where they were. It is not

a likely thing that any bird should use the same amount of force as he was obliged to do.

Loose bits of the plant floating down, and so being picked up, is certainly a question, and one I should much like to see worked out.* It is a strange and almost an incredible tale, that, a little weed first discovered in 1841, and supposed to have been accidentally introduced, should now in 1852 threaten to interrupt the navigation of our rivers and canals. So true is it that, "Multa minuta magna officiunt."

Christ College, Cambridge, November, 1852.

A LIST WITH NOTES ON THE HABITATS AND LOCALITIES OF THE LAND AND FRESH-WATER MOLLUSKS, OBSERVED IN THE VICINITY OF LEWES, IN SUSSEX.

BY W. C. UNWIN, ESQ.

It has somewhat surprised me when reading the various interesting and instructive Papers and Notices in "The Naturalist," upon almost every other subject in Natural History, to find how rarely we meet with any such exclusively devoted to our *Land and Fresh-water Mollusks*, considering how much this hitherto neglected branch has of late advanced, and is daily becoming more and more cultivated.

With this impression I venture to claim the indulgence of its readers to a brief account of the habitats and localities of some of the objects of this truly engaging and healthful pursuit, as they have been observed and collected by me in this neighbourhood, with the hope that it may induce some other votary to add a similar one of his district; for by this means we shall, if I may so speak, become acquainted with the comparative climatal and geographical range of the species.

The Nomenclature is from Gray's Edition of Turton, (1840.)

Bithinia tentaculata, *Gray*.—Very common in the levels.

Bithinia ventricosa, *Gray*.—Not uncommon in the ditches by the side of Kingston road.

Valvata piscinalis, *Lam*.—In every ditch very common.

Valvata cristata, *Mul*.—In a ditch near the Cookshat: somewhat rare.

Arion ater, *Gray*.—In the brooks: common.

Limax maximus, *Linn*.—In gardens and cellars, etc.

Limax agrestis, *Linn*.—Common everywhere.

Limax flavus, *Linn*.—By the side of a ditch near the Priory.

* Since writing the above I have had the pleasure of seeing Professor Henslow, and on asking him how the *Anacharis* has become so abundant, and likewise how it has found its way into so many different waters; he informed me that every separate whorl is capable of throwing out roots from its axis, and thus of becoming a distinct plant. Such being the case, birds and even beetles may convey the small portion necessary for the production of a perfect plant to the different streams.

Vitrina pellucida, *Flem.*—In Ashcombe plantation and elsewhere among moss.

Helix aspersa, *Mul.*—Too common; the variety *alba* is not uncommon.

Helix hortensis, *List.*—In a hedge-bank near Landport.

Helix hybrida, *Pior.*—A few specimens occasionally with the former.

Helix nemoralis, *Linn.*—Abundant.

Helix arbustorum, *Linn.*—By the side of the "Cut," near Landport: not uncommon.

Helix pulchella, *Mul.*—Plentiful at the roots of moss and grass on the Downs, and on the bank of Ashcombe plantation, facing the east.

Helix Cantiana, *Mont.*—On nettles, foot of the Downs.

Helix Carthusiana, *Mul.*—On stunted grass near Mount Caburn, and on Ranscombe Brow very local in its distribution.

Helix fusca, *Mont.*—Two specimens only. Warrinson wood, (1852,) favourite Entomological ground.

Helix aculeata, *Mul.*—Nine specimens among moss in Ashcombe plantation, 1851.

Helix hispida, *Mul.*—Common under chalk stones in the neighbourhood.

Helix concinna.—On nettles in an old chalk quarry, Offham, near Lewes. I possess beautiful specimens from Bignor.

Helix depilata, *Pfei.*—Ashcombe: not common.

Helix rufescens, *Penn.*—Abundant on nettles, and after the summer rains on the various species of *Rubi*. The variety *alba* frequent.

Helix virgata, *Mont.*—Frequent on the Downs; abundant all along the coast, Newhaven, Seaford, clustering thickly on the stems of marine plants; the sea-side specimens are much finer than those found inland: they vary considerably in their markings.

Helix caperata, *Mont.*—Very common on the Downs in autumn.

Zonites umbilicatus, *Gray.*—At the roots of *Asplenium Ruta-muraria* on an old wall in Southover, Lewes: rare.

Zonites pygmæus, *Gray.*—I found this species last year with some of the other minute Land Shells at the roots of moss, (principally *Hypnum purum* and *lutescens*,) and grass: it is not very common, but appears to be an inhabitant of dry banks.

Zonites alliarius, *Gray.*—Two specimens only, and these I can only state as this species from comparison, as I could not obtain from them any smell to lead me to conclude they were the Garlic snail.

Zonites cellarius, *Gray.*—Common generally.

Zonites rotundatus, *Gray.*—Under chalk stones and dry banks.

Zonites purus, *Gray.*—Rare on a dry bank near Ashcombe plantation.

Zonites nitidulus, *Gray.*—Common in a shaw near Kingston, and in Ashcombe plantation.

Zonites radiatulus, *Gray.*—Frequently found with the preceding.

Zonites lucidus, *Gray.*—Rare; by the ditches in the levels occasionally.

Zonites crystallinus, *Gray.*—Not uncommon on the Downs in company with

Helix pulchella among earth at the roots of grass, (1851.)

Succinea putris, *Flem.*—Common by the sides of ditches.

Succinea Pfeifferi, *Ross.*—Frequent with the above species.

Bulimus obscurus, *Drap.*—Not very common: Landport and Ashcombe.

Pupa umbilicata, *Drap.*—In old walls and under chalk stones: very common.

Pupa marginata.—Equally common at the roots of grass and moss on the Downs, and under loose flints.

Pupa Juniperi, *Gray.*—Plentiful under loose chalk stones in the "Home Pit," first pointed out to me in this locality by my friend, Mr. C. Potter; occasionally found on a chalky bank near Landport.

Vertigo edentula, *Gray.*—Rare: Chailey common. I have never found but two specimens, and those on the under side of *Filix mas*, (Male Tern.)

Vertigo pygmæa, *Fer.*—Rare at the roots of moss and grass on the eastern bank of Ashcombe plantation, (1850.)

Vertigo palustris, *Leach.*—Three specimens by the side of a ditch in the level at different periods.

Balæa perversa, *Flem.*—Not uncommon under lichens and the bark of thorns on the Downs, frequently several together.

Clausilia bidens, *Drap.*—At the roots of beeches among the fallen leaves in Ashcombe and Coombe plantations, and in the crevices of an old tree near Landport: not rare.

Clausilia nigricans, *Jeff.*—Abundant in the neighbourhood. The variety *C. parvula* I have frequently met with.

Carychium minimum, *Leach.*—Rare: at the roots of moss, (*Hypnum lutescens* and *cuspidatum*,) on a moist bank sloping towards the "Cut," near Landport, (1852, May 19th.)

Limneus auricularius, *Drap.*—In the "Cut" rare, but perhaps from the want of more diligent searching.

Limneus peregcr, *Drap.*—Abundant in every ditch.

Limneus stagnalis, *Drap.*—Common in stagnant ditches.

Limneus *var.* fragilis, *Turt.*—In the Pells.

Limneus palustris, *Drap.*—Very common.

Limneus truncatulus, *Jeff.*—On the mud, principally by the side of the "Cut," near Landport, rather plentiful: this is the only locality in which I have seen it hereabouts.

Limneus glaber, *Gray.*—In a ditch near Malling.

Ancylus fluviatilis, *Mul.*—On stones in the "Cut," and on the underside of the submerged leaves of the *Nuphar lutea*, (Yellow Water-Lily.)

Velletia lacustris, *Gray.*—On the leaves of the *N. lutea* with the preceding species, (May, 1852:) not rare.

Physa fontinalis, *Drap.*—Common: on aquatic plants in all the ditches round Lewes.

Planorbis corneus, *Drap.*—In the ditches, Malling; very fine in ditches, Pevensey level.

Planorbis albus, *Mul.*—Rather uncommon on the leaves of *N. lutea*, in company with *V. lacustris*.

Planorbis imbricatus, *Mul.*—Rare on *Callitriche verna* in a ditch near the Ouse.

Planorbis carinatus, *Mul.*—In stagnant ditches in the levels not very general.

Planorbis marginatus, *Drap.*—Very common.

Planorbis vortex, *Mul.*—
Planorbis spirorbis, *Mul.*— } Both common perhaps, but I really am puzzled to distinguish them.

Planorbis nitidus, *Mul.*—Until last spring I had considered this species very rare, having only met with one or two specimens, and those by mere chance, but on the 14th. of April last I dragged from a ditch in Kingston brooks a quantity of *Confervæ*, and on examining it, found some shells I had often wished to find; I resolved therefore to carry some home in my vasculum, and try an experiment recommended by a friend, namely, to place the mass in a basin and pour some warm water on it. This answered admirably; the animals relinquished their hold and fell to the bottom, and what was my surprise to find, on straining the water away, not two or three, but some dozens of various sizes, doubtless young ones; I was indeed much delighted with this discovery. As observed by my friend, they appear to come to maturity rapidly, for they all disappeared in about eight or ten days.

Planorbis contortus, *Mul.*—Extremely common in ditches among Fresh-water Algæ.

Segmentina lineata, *Flem.*—Rare; only two specimens have been noticed as yet, but the probability is, by adopting the above mode, it will be found comparatively common.

Cyclostoma elegans, *Drap.*—Abundant in the hedges round the South Downs.

Cyclas cornea, *Lam.*—Very common.

Cyclas lacustris, *Turt.*—Rare: but few have been found in the Cuckmere River.

Pisidium obtusale, *Pfei.*—Not common in clear ditches.

Pisidium pusillum? *Gray.*—Occasionally among Fresh-water Algæ, with other minute species. This genus requires some attention to distinguish the species; I have oftentimes had my skill put to the test, and even then have not arrived at a satisfactory decision.

Pisidium Henslowianum, *Jen.*—Two specimens only. This species is easily known, not only by its striking characters, but also by its size.

Pisidium amnicum, *Jen.*—Rare: in the Cut and the streams which empty themselves into the Ouse: not common.

Anodon cygneus, *Turt.*—Common in the Ouse and its tributaries. I possess a very fine specimen, given me by my friend Mr. Potter, which measures eight inches in length, and four and a half in width, with a beautiful well-marked and naturally-polished epidermis. It was taken, with several others

of similar dimensions, from a large pond in Firle Park, 1851. Some of the varieties are not uncommon in the Ouse and Cuckmere Rivers, also in the Pells.

Unio pictorum, *Lam.*—In the Cut common, and in the Ouse occasionally, varying very considerably in appearance, specimens in the Ouse being much darker, and having an extraneous coat, evidently from some matter with which the water is impregnated.

I shall be happy to assist any lady or gentleman with duplicate species by way of exchange.

St. Ann's Lewes, December 14th., 1852.

SOMETHING ABOUT POLYPES.

BY MRS. ARTHUR ADAMS.

Chapter I.

It is long since the wondrous re-productive power of the little Fresh-water Polype, (*Hydra viridis,*) amazed the scientific world, when Trembley immortalized his name by making known its extraordinary properties. Though the novelty of this discovery has subsided, and "the many" have ceased to experimentalize on this poor worm, there may be some who have still to learn its history, and that of the class of animals to which it belongs.

Polypes are aquatic plant-like animals, with their mouths encircled by radiating tentacles somewhat like the rays of a flower; they inhabit both the ocean and fresh water, and, when their numbers are considered, and what is effected by their agency, we must be convinced of their importance in the economy of nature. Earlier observers believed the stony Polypes to be calcareous plants, and until the year 1727 they continued to be classed with the vegetable kingdom, when Pleysonnel asserted their animality in an essay read before the Academy of Sciences in Paris, which was received by the members of that learned body with doubts and coldness. In 1741, Trembley made known his remarkable experiments on the Fresh-water Polype, and this undeniable proof of their animal nature caused Jussieu to surrender them to the zoologists. Donati shortly afterwards followed up the research, and in speaking of the animal nature of the Coral Polypes, says, "I am now of opinion that coral is nothing else than a real animal, which has a very great number of heads. I consider the Polypes of coral as the heads of the animal. This animal has a bone ramified in the shape of a shrub; this bone is covered with a kind of flesh, which is the flesh of the animal." Thus, by slow and sure degrees, the true nature of the Polype began to be appreciated by the learned, and has from time to time been ably commented on. Ellis, in 1754-5, explained his observations and experiments to the members of the Royal Society; and his work on the "Corallines of Great Britain," exhibits such accuracy and complete investigation as to be even now a standard work on this subject.

Linnæus considered our little friends as forming an intermediate class between the two kingdoms; but as the wisest sometimes err, "the Prince of Naturalists" was mistaken; and though his theory was peculiarly fanciful, Ellis's more accurate statements have superseded it. Enough has been said here of their history as a class, and of their advocates.

To return to the *Hydra*, whose home is in almost every pond or ditch. Among the duck-weed and other water-plants, it may be easily procured by those who wish to observe for themselves its form and habits. The most common species is the *Hydra viridis*, so small, that when stretched out, it looks like a little piece of green sewing-silk, but if the magnifying glass is used, it will be seen that the body is a little gelatinous bag with an opening at one end, which is its mouth, surrounded with seven delicate tentacles; at the opposite end nature has provided it with a flattened disc, by which it can attach itself to any fixed body, or move, though with extreme slowness, from one place to another. When disturbed, it contracts its body to an almost invisible speck, although no trace of muscles can be discerned in its composition. Its favourite position is suspending itself from some floating plant, and a still more novel mode of locomotion, which it sometimes employs, is to protrude its sucker above the water, hollowed out like a boat, possessing sufficient buoyancy to enable our *Hydra* to sport where he pleases by means of his tentacles, in readiness to secure whatever his appetite might fancy; and extremely carnivorous is he in his propensities;—animals, much larger and stronger than himself, fall a prey to his voracity; this is owing to the benumbing power possessed by his arms, which is so strong as to prevent the escape of the poor victim that has once been stricken by him. Larvæ of insects, worms, and the tiny Crustaceans, called *Entomostraca*, are his favourite food, and these being most abundant in every place where the *Hydra* dwells he is able to satisfy his desires; but it has been proved that he can endure a fast for many weeks and still live on. It is well that he possesses this stupifying power over his prey, for it is by a very slow process that he brings the food to his mouth; tentacle after tentacle lends its aid to assist, and by sure efforts accomplish their purpose.

But the most wonderful part in the history of the *Hydras* is the power which they have of multiplying their species; the most usual method is by means of buds, which sprout from some part of the surface of their bodies; at first the bud is shapeless, but soon it assumes the form of the parent animal, developing tentacles around the oral aperture. It remains attached to the body of the parent for some time, until it is perfect in all its parts, when it is cast off, and, in its turn, becomes the mother of a numerous progeny. "Trembley noticed that by snipping the side of an adult Polype with the points of a fine pair of scissors, a bud would soon develop itself from the wounded part, and this experiment was repeated until as many as seventeen had been obtained, all connected with each other, and thus forming a little tree of living Polypes." The *Hydra* will occasionally divide into two

animals by spontaneous transverse fissure. These are the natural ways by which the *Hydra* increases its kind; but, as Trembley discovered, it can be multiplied by artificial means; divide it in any direction and two perfect *Hydras* grow; cut them up into numerous pieces, and lo! from every section is produced a perfect whole; wound an adult, and where the scar is seen, there sprouts out a young *Hydra;* and Trembley says he had several everted, "their inside is become their outside, and their outside their inside: they eat, they grow, and they multiply as if they had never been turned."

It will be seen from this brief account of the little Fresh-water Polype, that the smallest thing in God's creation is "fearfully and wonderfully made," worthy of the investigation of all who love to contemplate the Divine perfection as shown in His works.

"Marvellous are thy works O Lord! and that
My soul knoweth right well!"

Knapps Green, Alverstoke, November 12th., 1852.

(To be continued.)

Miscellaneous Notices.

The Hare, (Lepus timidus.)—A gentleman, on whose veracity I can rely, told me the other day that he shot a Hare in September last, which, on being opened, was found to contain *five* young ones. Is not this an unusual number?—W. Waldo Cooper, West-Rasen, November 8th., 1852.

I had a common Hedgehog, (*Erinaceus Europæus,*) in confinement, and having heard that they would kill the common Snake, I put two into the place where it was, one a large one and the other rather small; it tried to seize the big one, but it hissed so furiously, that the Hedgehog began to coil itself up; it then seized the smaller one, which it instantly began to bite, beginning at the tail. I went to call my father to look at it, and when I came back, it had got up to the neck, having apparently broken the whole of the back-bone, as far as I could judge from feeling the Snake. The same Hedgehog would consume with avidity Partridges' eggs, and if I remember right, it would eat shells as well. The case of the Hedgehog and Snake happened *this summer*.—Philip Bedingfield, Ditchingham Hall, November 10th., 1852.

The Jer-Falcon, (Falco Islandicus,) *on the Tees*.—A fine young female specimen of the Jer-Falcon was shot by Henry Bales, one of the Floating Light-house keepers at the Tees mouth, on the 3rd. of December, 1852, after it had lamed itself by flying against the Floating light in close chase of a Wood Pigeon; but the Wood Pigeon not being so much hurt made off as fast as it could; and Henry Bales, to make sure work of it, shot the Falcon in the water. (There was another large Hawk seen about the same place a day or two after.) It was purchased by F. Green, Bird and Animal Preserver, of this town, and is now in the possession of Crawford Newby, Esq.—W. Martin, Stockton-on-Tees, December 13th., 1852.

The Hen Harrier, (Circus cyaneus.)—A specimen of this bird was shot on the 11th. of October, near this town, by Crawford Newby, Esq.—Idem.

Egyptian Goose, (Anser Egyptiacus.)—A very fine specimen of this bird was shot near Portrock Lake, about a mile from this place, on the 2nd. of November, 1852, by Mr. John Gray, and is now in the possession of Crawford Newby, Esq. It was in company with three others of the same species.—Idem.

Sclavonian Grebe, (Podiceps cornutus.)—A specimen of this bird was shot on the 13th. of November, 1852, in the River Tees, about two miles below this town, by F. Leach.—Idem.

The Eared Grebe, (Podiceps auritus.)—A fine specimen of this bird was shot by Henry Bales, Light-house keeper, near his Light-house, on the 12th. of April, 1846, and is now in the possession of Crawford Newby, Esq.—Idem.

The Squacco Heron, (Ardea comata.)—A specimen of this bird was shot on the 9th. of October, 1852, on the Glasgow canal by T. Jones, seaman, who brought it here; and it is now in the possession of Crawford Newby, Esq.—Idem.

Note on an Owl.—On Tuesday last as I was going out shooting with a friend, about half-past ten in the morning, we noticed an Owl flying at a great height, with several Rooks baiting it. The morning was cloudy, but the poor Owl seemed quite bewildered; he flew for a long time in circles rising higher and higher, keeping above the Rooks; at last his tormentors left him, and he flew away in a straight line, but without lowering as long as he remained in sight. I suppose he may have been driven out by the Rooks from his daily hiding-place, but I do not remember to have seen an instance of the like kind before. The Owl was at so great a height when we first saw him that we could not make out his species. W. Waldo Cooper, West-Rasen, November 4th., 1852.

The Rev. S. Alington informs me that last summer he caught a Cuckoo, (*Cuculus canorus*,) under the following peculiar circumstances:—He had a large net over his currant bed, and one morning a Cuckoo was found under the net, and captured. The same gentleman tells me that three years ago a White Starling, (*Sturnus vulgaris*,) was seen for some days in the neighbourhood of his residence, Candlesby, near Spilsby.—Idem.

The Rook, (Corvus frugilegus.)—I was surprised some time ago to find that a pair of Rooks had repaired their nest in an ash tree close by this house, and that eggs were laid in it, on which the hen sat diligently for about a month: she forsook her nest, the eggs being, I suppose, addled, about a week ago. This must surely be an odd freak, at least I do not remember to have ever heard of Rooks sitting at this time of the year.—Idem.

The Woodcock, (Scolopax rusticola.)—It is well known that Woodcocks breed in various parts of England, but I was not aware till the other day of any locality in Lincolnshire. Sir John Nelthorpe informs me that they breed in his woods at Scauby, near Brigg.—Idem.

Late Breeding of the House Martin, (Hirundo urbica.)—On the 27th. of last October I was greatly surprised by a neighbour of mine sending me a young House Martin that he caught in a stable; no doubt it was attracted there by the warmth, it being a cold and wet day. When first brought it would perch upon my finger without the slightest attempt to fly, but after being put into a hat an hour or so, it seemed re-animated, and could fly across the house. I again put it in the hat, and soon found the poor little fellow dead—starved to death. I should say it had left the nest about four or five days at most, and had scarcely any food since; as a proof of this I examined the fæces, and found not a particle of the refuse of insects in it, nothing but a thin whitish substance; the crop too was quite empty, and the body very thin: although a bad specimen I have stuffed it. Reflecting upon the fate of this poor "untimely bird"—upon its parents which are now no doubt skimming joyously over other lands, I could not suppress a feeling of pity, to think how strange that Nature should completely cut it off from following the instinct of its species.—W. Bond, Frog Island, Leicester, November 4th., 1852.

The Hoopoe.—A specimen of this bird, (*Upupa Epops*,) of which so many notices have been communicated to you of its appearance in England, induces me to intimate that we have also had a visit; for on the 1st. of October, 1852, one was observed on the property of Blairs Kaith, about six miles to the north of the city of Glasgow, where it remained for about ten days. It was particularly shy, and as its flight appeared principally to be from the bare top of a tree into the centre of a lea field, it would never permit of being approached sufficiently near to have ensured it of "a place in the cabinet."—G. Donaldson, Glasgow, November 4th., 1852.

Woodcock.—The early arrival of the Woodcock, (*Scolopax rusticola*,) having been frequently noticed in "The Naturalist," causes me to remark that on the banks of Loch Lomond, and particularly in the neighbourhood of Luss, this bird has been known regularly to *breed* for a number of years past, and can be seen at any time during the summer, but particularly in the evenings.—Idem.

The Magpie, (Pica caudata.)—About the middle of last July, I had the satisfaction of shooting one on my farm, differing very materially in plumage from the common rule; for with the exception of the usual white markings upon the wings common to the bird, the entire colouring otherwise was of a reddish tint, faintly shaded with ashy white. The skin is at present in the possession of Mr. Mc'Culloch, Bird-stuffer, Union-Street, Glasgow; and what appears remarkable that in another nest a bird of a still richer shade was produced, and which, as I have frequently seen, I expect some day to possess.—JOHN LAURIE, Stronhullin, Loch Long, October 30th., 1852.

The Storm Petrel, (Thalassidroma pelagica.)—A man in this village has just brought me a beautiful specimen of the Storm Petrel, which he picked up in an exhausted state in the fields. His attention was drawn to the spot by seeing the Rooks flying round the place where the bird lay in the same manner that they do when they find a Hare in a snare, or see a Fox. I have sent it to be stuffed for my collection.—C. THURNALL, Whittlesford, Cambridge, November 15th., 1852.

The Rook, (Corvus frugilegus.)—I have been credibly informed by a friend that at Encombe, near Swanage, the seat of the Earl of Eldon, a nest of young Rooks may now be seen, nearly fledged, whilst the trees are almost wholly denuded of their leaves.—JOHN GARLAND, Dorchester, October 30th., 1852.

The Horse Chestnut, (Vulgaris Castanea.)—In the delightful Avenue of Chestnut trees in this town, called "The South Walk," may now be seen many of them shooting forth young leaves just as in spring; which, with the falling of the "sere and yellow leaf" from the same trees, affords to the observer a very curious contrast.—Idem.

Review.

A Popular History of British Zoophytes or Corallines. By the REV. D. LANDSBOROUGH, D. D., A. L. S., &c. London: REEVE AND Co. 1852. Royal 16mo., p. p. 404. Twenty-two Coloured Plates.

WE are much gratified to see that Dr. Landsborough has *"popularized"* another delightful branch of Natural History in the above pleasant little volume on British Zoophytes. His very useful work on Sea-weeds is, we trust, familiar to many of our readers; and to any who desire to know the beauties peculiar to our animated Sea-flowers, the book before us will be found a very valuable and safe guide. The first chapters, which are introductory, will be read with much interest, and the wholesome precepts which are mingled with the general remarks cannot fail to benefit those who take up the subject in a proper spirit, and wish not to consider any of God's wonderful works but as evidences of His power and goodness. The portion of the work which succeeds this consists of the technical descriptions, which, as far as they go, are clear and definite; but we could have wished to have seen descriptions, however short, of *every* species. Still, even with this drawback, the book is one that cannot but be a great assistance to those who wish to study the Zoophytes; and the delicately exact and beautifully coloured figures of some eighty well chosen species will enable any person to name correctly a large number of those most commonly met with, and to obtain a close approximation to the proper place of any he may procure. The arrangement followed is that adopted by Dr. Johnston in his admirable

work. The study of these beautiful and truly interesting creatures is yet comparatively in its infancy, and it is probable that many new and elegant forms remain to be discovered by future observers. One very elegant *Lepralia*, figured, we believe, for the first time by Dr. Landsborough, and named *Gattyæ*, after its recent discoverer Mrs. Gatty, is remarkable for the extreme beauty of the pencilling upon its surface, and had doubtless been overlooked very many times by less careful observers.

There is one strikingly useful feature in the work, which is that, we believe, no term used in the description of the genera or species is unrepresented in the glossary which occupies the concluding pages. It is amply full, and the meanings of the terms are well and clearly expressed, so that no one need be in any difficulty as to the *meaning* of any description he may encounter.

No one at all interested in the subject would ever, we believe, regret the few shillings necessary for the purchase of this very pretty and useful work.

Proceedings of Societies.

Royal Physical Society of Edinburgh.—The third meeting of this Society for the present session was held in the Institution Rooms, 6, York Place, on Saturday, January 8th., at two o'clock P. M.,—Professor Fleming, D. D., President, in the chair.

The first business before the Society was the Exhibition of a Collection of Stereoscopic Photographs, by JOHN STEWART, ESQ.

The second communication, by HUGH MILLER, ESQ., was entitled "On *Bothrodendron*, *Ulodendron*, *Stigmaria*, and other characteristic plants of the Carboniferous Period; with restoration of *Sphenopteris elegans*."

The third was a "Notice of the *Octopus octopodia*." by JOHN STEWART, ESQ. Mr. Stewart referred to the description given in Fleming's British Animals, page 254; and stated that the specimen he exhibited was caught on a hook in the Bay of Luce, October 26th., 1852. Its dimensions were as follows:—Length of body, about three inches and three-quarters; breadth, two inches and three-quarters; length of head, an inch and a half; breadth, an inch and three-quarters; length of arms, nine inches; but the lowest arm on the left side was only seven inches long. He had taken three specimens last year in Loch Ryan, and two in Morecombe Bay, North Lancashire. Mr. Stewart also stated that Mr. George Wilson, who had sent him this specimen, informed him that an *Albicore* had been taken last year in a salmon bag net at Strathaven, which was twenty-five inches in length, seventeen in girth, and weighed ten pounds.

JAMES C. HOWDEN, ESQ., M. D., then read a communication entitled "Notes on Marine Zoology."

DR. JOHN ALEX. SMITH next exhibited a specimen of a Duck which was shot in December, 1851, near the Bass Rock, by some boatmen, who brought it, from its unusual appearance, to one of the Edinburgh bird-stuffers. Dr. Smith said he had been puzzled to find out what it was; but by the kind assistance of one of our celebrated ornithologists, he learned that it was a West Indian species,—the Bahama Duck,—the *Anas Bahamensis* of Catesby's Carolina,—the *A. urophasianus* of Vigors, Zoological Journal, vol. iv., page 337,—the *Dafila urophasianus* of Eyton's Duck Tribe,—and the *Urophasianus Vigorsii* of Beechy's Voyage, &c., &c.,—the inference being, that it had probably escaped from confinement. Dr. Smith said there were no individuals of this species in the Zoological Gardens here, or amongst the collection at Gosford House; and, indeed, he was quite unable to learn of any being kept in confinement either immediately to the south or north of the Firth of Forth. He was informed that three living specimens are at present in the collection of the Zoological Gardens, Regent's Park,

London. The colour of the bird, Dr. Smith observed, was dark and light reddish brown, spotted with dark brown; the lower parts of the head, and upper parts of the neck in front, pure white; speculum, green, glossed with purple, and edged with black and light reddish fawn; the tail, light drab, without spots, rather elongated, shaped somewhat like a Pheasant's,—hence the name; and there was a striking patch of yellow on each side of the dusky bill.

Dr. Greville, at the close of the meeting, informed the Society that the Honourable Edward Chitty, of Jamaica, had presented an extensive and valuable series of the Land and Fresh-water Shells of Jamaica to the University Museum; but being aware that in the present state of the Museum, the absence of due accommodation would prevent the collection from being of any use to the public were it deposited there, he had confided it for the present to the charge of Sir William Jardine, Bart., Professor Balfour, and himself, (Dr. Greville,) as trustees. The collection, which is arranged on the authority of Mr. C. B. Adams, Professor of Zoology in Amherst College, Massachusetts, is now in Dr. Greville's house, accessible at all times to gentlemen desirous of consulting it.

The Retrospect.

Wood Anemone, (Anemone nemorosa.)—Mr. Rothery remarks, vol. ii. page 208, that the Wood Anemones which he found in Westmoreland "were all more or less tinged with purple," and attributes it to certain causes which he mentions. I do not remember ever to have seen any Wood Anemone that was not flushed with purple; unless indeed those which had been bleached by age, sun, and wind. In the summer of 1848, I walked across a field near Overton, in Cheshire, which was very thickly besprinkled with the Wood Anemone. They cast a purple hue over the whole field. I have picked the flower in Somerset and in Devon, in dense woods and on sunny banks; they all partook of the purple hue. I make no doubt that season and soil, especially lime, may alter and deepen the colour of some flowers, still I see no reason for believing any other than that pale purple is the natural and characteristic colour of the Wood Anemone. The Lady's Smock, (*Cardamine pratensis*,) blooms out a faint purple, and presently it is bleached white.—Henry Daniell, Montevidere, Torquay, October 18th., 1852.

The Querist.

Will any correspondent be kind enough to inform us how to propagate and cultivate the Common Reed, (*Arundo Phragmitis*,) round a pond with a gravelly bottom.—B. R. M.

Inquiry as to Heronries in Derbyshire.—Having occasion about three or four years ago, in the spring, to go to Howden, a shooting-box of the Duke of Norfolk's, in Derbyshire, on the borders of Yorkshire, I there saw nailed against the barn two Herons which the gamekeeper had shot, one of them nine days, and the other three or four weeks previously, as they were seeking for trout about the fish-pond and in the river, (the Derwent,) which takes its rise a few miles above on the moors. Can any of the readers of "The Naturalist" say where they were likely to have strayed from, as I am not aware of any Heronries anywhere in the neighbourhood.—T. S., Holmfirth, December 14th., 1852.

In reply to a former inquiry of mine in the Querist, respecting the different kinds of trees that will grow from cuttings, Mr. Mc'Intosh obligingly wrote to me saying that he would take an opportunity of giving the desired information. As he has not yet done so, I should be glad of this opportunity of again drawing his attention to the subject.—F. O. Morris, Nafferton Vicarage, Driffield, February 1st., 1853.

Could any of the contributors to "The Naturalist" inform me through the medium of its pages, what is the comparative size of the eggs of the Goldfinch and Chaffinch? Also, what is the *real* colour of the eggs of the Sedge Warbler and Whinchat? The situation and number of any shop in London where eggs may be procured?—H. S., Richmond, Yorkshire.

On the 24th. of May, 1852, I found by the side of a small stream, a nest built of hay, roots, small twigs, etc., and containing six eggs, rather larger than those of the Blackbird, but much resembling them. Might not this be the nest of the Ring Ouzel?—Idem.

ON THE HABITS OF THE COMMON MOUSE, *(MUS MUSCULUS.)*

BY R. F. LOGAN, ESQ.

For some time past I have had a live specimen of the Common Mouse in captivity, for the purpose of observing its habits; and as Common Mice are, I should think, not very often kept as pets, unless it be the albino variety, it may perhaps interest some of your readers to know something of the manners of this agile, timid little cosmopolite.

For a short time after its introduction to its domicile, it was restless and watchful, constantly biting the wires with its teeth; and in so doing, making such a noise, that had its teeth not been very hard and strong, they must have been broken to pieces by such violent exercise on so hard a substance. Now it sleeps away most of its time during the day, rolled up in a corner like a ball, but is roused by the slightest noise; and when food is placed within its reach, awakes to full activity, steals out of its corner, seizes it in its mouth, and runs with it generally into the opposite corner; where it munches it, holding it between its fore feet, and crouching on the hinder ones; but not sitting erect, as we see Mice frequently drawn. This posture it very seldom assumes; but does so occasionally when cleaning its fur, though never, I believe, while feeding. It is a most cleanly little animal, and always dresses its fur after a meal; licking its paws quite clean, and then raising them both together over its head, and stroking down its face and ears; finishing the operation by licking its fur as far as it can reach, very much after the manner of its enemy the Domestic Cat. When about to lie down it generally turns round once or twice in the corner, like a Cat or Dog; and laps up milk, when given to it, exactly in a similar manner. One day when I thought it thirsty, I offered it a drop of water on the end of my pen, which it licked off with avidity, and followed the pen when withdrawn for a fresh supply. In sleeping it frequently tucks its head right under its body, so as literally to rest on the crown of it; a most uncomfortable position one might suppose; but one which it seems very fond of. I have never heard it squeak, or utter the smallest sound since it came into my possession; which is rather remarkable. As another proof of its disposition for cleanliness; I had one morning given it some soft food, in eating a portion of which, it rolled it in the dirt at the bottom of the cage, on discovering which, it immediately rejected it, and pushing it with its snout to the furthest extremity of the cage, returned to its favourite corner; which it swept perfectly clean in the same fashion, shoving everything aside with its snout, and then went for a fresh supply.

It is nearly, though not quite, omnivorous in its appetite, as there are some things it will not touch. It dislikes animal food, and shows a marked preference for farinaceous substances; bread being an especial favourite. A bit of ripe pear, or cooked cabbage, it will not touch, though a dried fig is eaten with evident relish.

Duddingston, December 1st., 1852.

BRITISH MUSEUM NATURAL HISTORY

NOTES ON THE ORNITHOLOGY OF THE LEEDS DISTRICT, WITH A CATALOGUE OF THE RARER SPECIES.

BY JOHN DIXON, ESQ.

Before submitting to your pages a somewhat tedious and imperfect catalogue of the ornithological rarities of this district, I must acknowledge the obligation due from me to George Walker, Esq., of Killingbeck Lodge, and William Wood, Esq., of Moor Allerton; two *practical* naturalists, from whose joint contributions and remarks I have drawn pretty freely; and as the observations extend over a period of many years, I have been enabled, with the aid of inspecting a few private collections, to complete a list of one hundred and fifteen birds occurring in the vicinity of Leeds, a field which at first sight would seem to furnish few attractions for any of the feathered tribe, save a few dirty impudent Sparrows, whose noisy carols are always heard amidst the busiest scenes of industry.

It gives me much pleasure to find that many of our humble artisans seek to pass a few pleasant leisure hours in the study of Natural History; and what a delightful relaxation it must be to those of our poorer fellow-creatures, whose daily bread is earned by a routine of almost incessant toil. I have examined with great satisfaction several ornithological collections formed by working men, the majority of specimens having been procured in the immediate neighbourhood of this smoke-canopied town. With such limited means and brief leisure, it seems surprising how such collections are got together; but no doubt the clue to this success may be found in the good old adage—"Where there 's a will there 's a way." Some do not confine their pursuits entirely to the feathered tribe, but will exultingly exhibit their cabinets of fossils or insects, or perhaps warmly expatiate on the beauty of some floral gem just added to a well-selected herbarium—delightful remembrancer of sunny fields and shady groves: such pursuits must lead the reflective mind to a due consideration of the everlasting gratitude we owe to the Giver of all good gifts.

Within the memory of old people still living, many noble varieties of the *Falconidæ* were to be found in this locality, particularly about the woody districts of Harewood and Temple Newsam; but as all this tribe have been long looked upon as arrant rascals, a wholesale persecution has materially diminished their number. A fine specimen of the Peregrine-Falcon was shot a few years ago near Winmoor, in the act of pouncing on a Ring Dove; two or three specimens of the Buzzard, Kite, Harrier, Hobby, and Merlin, have within a few years been shot at Gledhow, (this name is derived from Glead—a Kite; and How—a hill,) Harewood, Roundhay, and Killingbeck; the Kestrel and Sparrow-Hawk are about the only representatives of this class now left, both of which will doubtless be exterminated ere long.

A specimen of the Short-Eared Owl was caught alive at Roundhay, blindly flying in the glare of a mid-day sun, and "bully-ragged" by a parcel of small birds. The last Tawny Owl coming under my notice was shot one night at

Gledhow, by an old poacher, who mistook it for a Woodcock. The story runs that before levelling his gun, the old fellow, (who had a dash of the Shaksperian in his composition) muttered "If thou be a Woodcock, as I suppose thou be, have at thy long bill." His failing eyesight however for once deceived him, and he picked up the poor bleeding and dying Owl with a good round volley of imprecations on the whole tribe, since which time none have been seen at Gledhow.

The Raven, some seventy years ago, is said to have been tolerably plentiful; it is now quite extinct; the last solitary pair were seen hovering about Almais Cliff, near Harrogate. The Hooded Crow is often shot in winter. The Magpie with us seems very local; thus at Killingbeck it is considered rare, while in the neighbourhood of Meanwood it is tolerably plentiful, building in old thorns and slender birches. The Jackdaw used to be very abundant about the ruins of Kirkstall Abbey, but somehow or other their numbers appear to be rapidly diminishing. A short time ago I was sketching some portions of Calverley Church, and had occasion to examine and make some notes on the bells. On ascending the spiral staircase, I was astonished to find it almost blocked up with Jackdaws' nests, built of huge pyramidal piles of sticks; with some difficulty I managed to pass them, though I fear not without causing some damage. It seems probable that the sticks are collected by the birds, and dropped in at the narrow embrasures until a sufficient quantity is collected to build these singular nests.

In the flat meadows about Killingbeck, immense flocks of Starlings congregate just before the commencement of winter, accompanied by their sable allies the Rooks;—it is very pleasing to pass a few minutes in watching their graceful movements when on the wing. The Fieldfare's note is often heard after dark, right over the town; but whether this bird keeps late hours or not I cannot determine. Last year I found a Titlark's nest at Moor Allerton, the occupant being a young Cuckoo; when nearly fledged it was trodden to death by a foal.

The Mountain Sparrow, Twite, and Linnet are common about the high barren lands of Moortown and Blackmoor; these are favourite localities with bird-catchers, who, on fine Sunday mornings in spring, are to be found busily entrapping great numbers of unfortunate Larks and Linnets; these are taken to Leeds, and exposed for sale on market days, at about sixpence each; some die on their journey, and thus escape a cruel imprisonment; others contrive to once more cheer up, and pour forth a sweet lament over lost freedom. The Goldfinch is common about Sherburn, and all districts where the teazle is cultivated, the seeds of which it seems very partial to. The country people call them 'captains:' in this district it may be considered rare. The Golden Plover is found in small flocks about Winmoor; its principal food here seems to be worms, slugs, and snails, the shells of which are often found in its stomach quite entire. The various species of Water-Fowl enumerated in my list, have been observed or shot at Killingbeck. There are several other localities with large sheets of water, where most of them are occasional visitants, as Roundhay, Harewood, and Eccup.

The Numbers 1, 2, 3, denote the several degrees of rarity; namely, 1 Very rare. 2 Rare. 3 Occasional visitants.

1	Falco peregrinus,	(Peregrine Falcon,)	Roundhay.
3	—— subbuteo,	(Hobby,)	Killingbeck.
2	—— Œsalon,	(Merlin,)	Do.
3	Accipiter nisus,	(Sparrow-Hawk,)	Moortown.
1	Milvus vulgaris,	(Kite,)	Killingbeck.
1	Buteo vulgaris,	(Buzzard,)	Do.
1	Circus æruginosus,	(Moor Buzzard,)	Winmoor.
1	—— cyaneus,	(Hen Harrier,)	Killingbeck.
1	Otus vulgaris,	(Long-eared Owl,)	Do.
1	— brachyotos,	(Short-eared Owl,)	Do.
2	Strix flammea,	(White Owl,)	Do.
2	Syrnium stridula,	(Tawny Owl,)	Roundhay.
2	Lanius excubitor,	(Great Ash-coloured Shrike,)	Winmoor.
2	—— collurio,	(Red-backed Shrike,)	Do.
1	Corvus corax,	(Raven,)	Killingbeck.
2	—— corone,	(Carrion Crow,)	Roundhay.
3	—— cornix,	(Hooded Crow,)	Do.
3	Garrulus glandarius,	(Jay,)	Killingbeck.
3	Bombycilla garrula,	(Waxwing,)	Do.
1	Turdus torquatus,	(Ring Ouzel,)	Do.
1	Picus viridis,	(Green Woodpecker,)	Temple Newsam.
1	—— major,	(Least Spotted Woodpecker,)	Do.
1	Sitta Europœa,	(Nuthatch,)	Winmoor.
2	Certhia familiaris,	(Creeper,)	Killingbeck.
2	Loxia curvirostra,	(Crossbill,)	Do.
1	Coccothraustes vulgaris,	(Grossbeak, or Hawfinch,)	Do.
2	Pyrrhula vulgaris,	(Bullfinch,)	Roundhay.
3	Emberiza nivalis,	(Snow Bunting,)	Killingbeck.
1	—— schœniclus,	(Black-headed Bunting,)	Do.
2	Linota linaria,	(Lesser Redpole,)	Do.
2	Alauda arborea,	(Woodlark,)	Do.
2	Motacilla cinerea,	(Gray Wagtail,)	Do.
2	—— flava,	(Yellow Wagtail,)	Do.
1	Muscicapa luctuosa,	(Pied Flycatcher,)	Do.
3	Philomela luscinia,	(Nightingale,)	Calverley.
2	Sylvia hippolais,	(Lesser Pettychaps,)	Roundhay.
2	Salicaria phragmitis,	(Sedge Bird,)	Killingbeck.
2	Curruca atricapilla,	(Black Cap,)	Do.
1	Regulus cristatus,	(Golden-crested Wren,)	Do.
1	Saxicola œnanthe,	(Wheatear,)	Blackmoor.
1	Parus caudatus,	(Long-tailed Titmouse,)	Winmoor.
2	Cypselus apus,	(Swift,)	Roundhay.

3 Caprimulgus Europœus,	(Nightjar,)	Moortown.
3 Columba œnas,	(Stock Dove,)	Gledhow.
2 Phasianus Colchicus,	(Pheasant,)	Killingbeck.
1 Coturnix vulgaris,	(Quail,)	Do.
1 Rallus aquaticus,	(Water Crake,)	Do.
1 Cinclus aquaticus,	(Water Ouzel,)	Do.
1 Alcedo ispida,	(Kingfisher,)	Methley.
3 Scolopax rusticola,	(Woodcock,)	Killingbeck.
2 ——— gallinago,	(Snipe,)	Do.
2 Totanus ochropus,	(Green Sandpiper,)	Winmoor.
2 ——— hypoleucos,	(Common Sandpiper,)	Do.
3 Ardea cinerea,	(Heron,)	Killingbeck
3 Fulica atra,	(Coot,)	Do.
3 Podiceps minor,	(Little Grebe,)	Do.
3 Larus canus	(Common Gull,)	Do.
3 Anser ferus,	(Bean Goose,)	Do.
3 —— palustris,	(Wild Goose,)	Do.

We are at a loss to know which of the Geese are referred to here. The Bean Goose is usually called A. Segetum. The other is equally uncertain.

B. R. M.

3 Oidemia fusca,	(Velvet Duck,)	Killingbeck.
3 ——— nigra,	(Scoter,)	Do.
3 Anas clypeata,	(Shoveler,)	Do.
3 ——penelope,	(Wigeon,)	Do.
3 Fuligula ferina,	(Pochard,)	Do.
3 ——— clangula,	(Golden Eye,)	Do.
3 ——— cristata,	(Tufted Duck,)	Do.

(To be continued.

ADDITIONS TO THE LEPIDOPTERA OF MIDLOTHIAN.

BY R. F. LOGAN, ESQ.

The following species were unintentionally omitted from the List of the Lepidopterous Insects of Midlothian, published in "The Naturalist," vol. ii., page 121, by Dr. Lowe and myself:—

Polyommatus, *Lat...*—Agestis? Mr. Stewart, Wern. Transac., 1808.

Dasychira, *Steph.....*—Fascelina: larva on heath, Pentland Hills.

Agrotis, *Och.....*—Lunigera: Duddingston, August, 1844.

Chlorochroma, *Dup.*—Æruginaria: Mr. Stewart.

Fidonia, *Steph.....*—Atomaria: Pentland Hills, &c; abundant in May.

Chloroclysta, *Hub...*—Psittacaria: a single specimen at Duddingston in November.

Eupithecia, *Curt*.....—Palustraria: Belstane, near Kirknewton.
" " —Begraudaria: Eo. Loc.
Stenopteryx, *Guen*...—Hybridalis: Musselburgh Links.
Tortrix, *Linn*.....—Gorbiana: Stewart's list.
Spilonota, *Steph*.....—Roborana: Portobello.
Grapholitha, *Tr*.... .—Penkleriana: Ravelrig, in birches.
Coccyx, *Tr*.....—Nanana: Belstane, in spruce firs.
Retinia, *Guen*.....—Pinivorana: Eo. Loc.
Dicrorampha, *Guen*.—Caliginosana? common in July.
Tinea, *Linn*.....—Biscelliella: houses.
Telea, *Steph*.....—Cerasiella: Currie; hedges.
Micropteryx, *Hub*...—Fastuosella: Craigmillar.
Œcophora, *Lat*.....—Senescens: Arthur's Seat, July.
Depressaria, *Haw*...—Alstrœmeriana: not unfrequent in spring and autumn.
" " —Badiella: Musselburgh Links, in furze.
Coleophora, *Hub*....—Annulatella: not unfrequent among grass in July.
" " —Therinella? margin of Duddingston Loch.
" " —Fuscedinella: elms, alders, and birches.
Nepticula, *Zell*.....—Ignobilella: Cramond.
" " —Pygmæella: Duddingston.
Lithocolletis, *Zell*...—Tenella: Belstane, near Kirknewton.
Pterophorus, *Geoff*...—Punctidactylus: occasional; Duddingston, Roslin.

The following additional species have been added during the past season, (1852,) arranged for convenience in the order of their discovery:—

1.—Phlæodes immundana, *F. & R.*—Musselburgh, among alders, in April.

2—Lithocolletis Messaniella, *Z.*—Bred from evergreen oak, (*Quercus Ilex*,) at Balgreen, in May.

3.—Tinea bistrigella, *Haw.*—Ravelrig Bog, among birches, in May, Dr. Lowe.

4.—Nepticula argyropeza, *Z.*—Eo. Loc.

5.—Gelechia proximella, *Hub.*—Eo. Loc.

6.—Glœa rubricosa, *W. V.*—Pentland Hills, May 3rd.,

7.—Œchmia Haworthella, *Steph.*—Eo. Loc., Peat bog.

8.—Phytometra ænea, *W. V.*—Eo. Loc., May 24th.

9.—Maesia favillacearia, *Hub.*—Eo. Loc., May 24th.

10.—Elachista ————?—Arthur's Seat, rushy hollow top of north-east hill, June.

11.—Gelechia politella, *Doug.*—Eo. Loc., top of north-east hill in abundance.

12.—Crambus Dumetellus, *Hub.*—Musselburgh Links, July 13th.

13.—Crambus Contaminellus, *Hub.*—Eo. Loc.

14.—Crambus Lithargyrellus.—Eo. Loc.

15.—Miana furuncula, *W. V.*—Eo. Loc.

16.—Caradrina Morpheus, *Hufu.*—Leven Quarry, near Musselburgh.

17.—Lozopera, Smeathmanniana, *Fab.*—Eo. Loc.

18.—Aetebia Præcox, *Linn.*—Duddingston, August.

19.—Agrotis valligera, *W. V.*—Musselburgh Links, along with Tritiei, Cursoria, and Fumosa, August.

20.—Gelechia Anthyllidella, *Hub.*—Eo. Loe.

21.—Gelechia marmorea, *Haw.*—Eo. Loe., a single speeimen.

22.—Gelechia ————?—Eo. Loe.

23.—Gelechia ————?—Eo. Loe.

24.—Xanthia flavagò, *Fab.*—Ravelrig Bog, among birches, Mr. Alexander Logan, August.

25.—Tinea ferruginella, *Hub.*—Leith, Mr. Campbell.

In the previously-published list there are a few errors, which it will be as well to correct here. Page 127, *Hadena splendens* should be *H. Pisi*, var. *splendens*, St.; page 142, dele *Eupisteria carbonaria* altogether; page 144, for *Leptogramma littorana* read *L. literana;* page 144, for *Peronea asperana* read *P. aspersana;* page 146, *Eupœcilia ambiguana?* should be *E. atricapitana*, St., Brit. Mus. Cat.; and page 146, *Eudorea lineola* should be *E. murana*, Curt.

Duddingston, Edinburgh, February 21*st.*, 1853.

LIBELLULINÆ OBSERVED IN SUSSEX, CHIEFLY IN THE NEIGHBOURHOOD OF LEWES.

BY W. C. UNWIN, ESQ.

It has been remarked by some that mere local lists are comparatively useless, but an enthusiastic admirer of nature and poetic writer, who has gazed upon nature not only with eyes of love but of philosophy, remarks "that every one who assists to turn the attention of our youth to subjects which must lead them into the country, be he the merest plodder, the merest arranger of other men's knowledge, the merest cataloguer of names, does a good service." With this apology I may be pardoned for trespassing on the pages of "The Naturalist" with another of my "local lists," representing a tribe of beautiful insects, of which rarely a notice creeps into any of the journals devoted to Natural History—the active and elegant family of *Libellulinæ*.

The species subjoined in the following list have either been observed or captured by myself in Sussex, principally in the immediate neighbourhood of Lewes; and, although I am far from supposing it is a complete list, it is a faithful and correct record of the results of many pleasant and happy hours spent with nature in her solitudes, and the contemplation of her varied beauties. It may be the few brief observations here noted will not be without their use or interest to some youthful entomologist, as an introduction to his studying this small portion of nature's gems among the productions of his district. Although the larvæ of these insects inhabit the water, (the economy of which is highly interesting and truly wonderful,) yet in the imago

state they do not at all times affect the sides of rivers, ponds, and marshy places, but are to be met with in woods, lanes, and on the barren heath and bleak down.

Agrion elegans, *Van. Lin.*—Very frequent near Lewes.

Agrion Puella, *Lin.*—Of frequent occurrence near the Stream Winterbourne and elsewhere round Lewes; it is somewhat variable in colour.

Agrion furcatum, *Charp.*—I have taken this pretty species in the Lewes levels very commonly.

Agrion rufescens, *Leach.*—Kingston and Landport, near Lewes: not uncommon.

Pyrrhosoma minium, *Charp.*—Abundant round the neighbourhood of Lewes, varying much in the brightness of colour.

Platycnemis platypoda, ♀ *Van. Lin.*—I captured one specimen on the Downs near the town in July, 1849.

Calepteryx virgo, ♂ ♀ *Lin.*—Very common on the banks of the "Cut" and the River Ouse towards Barcombe Mill.

Calepteryx Ludoviciana, *Leach.*—Equally abundant as the preceding species, frequenting the same localities.

Calepteryx hæmorrhoidalis.—I possess specimens which I captured near Horsham in 1849, and for some time I considered them only varieties of *C. Ludoviciana*, until a friend pointed out to me their distinction.

Calepteryx aneeps, *Stephens.*—This species I also took near Horsham in 1849. No doubt a common insect, but easily overlooked from its close resemblance to the female of *C. hæmorrhoidalis;* however, upon comparison, it is readily distinguished by the wings being of closer texture, and the neuration different.

Anax formosa, *Van. Lin.*—In the neighbourhood of Uckfield I once captured this fine and elegant species.

Æshna grandis, *Lin.*—This fine species is not uncommon in the neighbourhood. I have taken both sexes; the female may be known by the wings being of a deeper yellow.

Æshna maculatissima, *Latreille.*—I have never met with this beautiful insect but at Uckfield and Newick, frequenting the margins of woods. It is one of the large species so difficult of capture from its strong and rapid flight. It will occasionally alight, but, being an extremely nervous and shy insect, will not suffer you to approach it in this position.

Brachytron vernalis, *Van. Lin.*—Of very frequent occurrence, and may be easily taken on a dull day in early summer in lanes, resting on the leaves of bushes: a very handsome species, pretty constant in its colour and markings.

Gomphus vulgatissimus, *Lin.*—Rare: I captured one specimen on the Sussex Downs in 1846, and another at rest on a hawthorn in Love lane, in Lewes, in 1851; these are the only examples I have seen.

Cordulia ænea, ♀ *Lin.*—I possess a specimen which was captured near Horsham in June, 1846.

Libellula depressa, ♀ ♂ *Lin.*—Both sexes are very plentiful on the Downs, frequently resting on the furze-bushes or hawking for prey over the sheep-ponds. I have often found the larva in these ponds. It is a strong, powerful, and pugnacious insect, and extremely tenacious of life.

Libellula conspurcata, *Fab.*—One specimen only, taken on the Downs; I supposed it at the time to have been a variety of *L. depressa*, but upon close examination it proved to be this species.

Libellula 4-maculata, *Lin.*—Rare: but few examples have come under my notice, and those at distant periods; all have been observed on the Downs. I have been informed by a friend that it is rather abundant in the New Forest. It appears in July.

Diplax rufostigma.—I have taken this distinct species at Kingston, near Lewes, in September, 1849, and again in 1851.

Diplax vulgata, *Lin.*—Very common in the neighbourhood of Lewes, appearing in July and August; it is a very variable insect in size and colouring.

The above list contains rather above half the known British species, and doubtless more will be added to the catalogue as the district is more diligently searched and their haunts visited.

St. Ann's, Lewes, February 15th., 1853.

MARINE ANIMALS.

MOLLUSCA.—Part I.

BY O. S. ROUND, ESQ.

(Continued from page 34.)

This name was given by Baron Cuvier to a race of marine beings, of which the Barnacles, (*Cirrhopoda*,) and the Cuttle-fish, (*Cephalopoda*,) are familiar examples. To those animals the *Conchifera* have been added by modern professors, and this class is represented by the Oysters, Scallops, Cockles, and Mussels. The Barnacles are too well known to need a particular description; they are all marine, and are found in clusters adhering to the bottoms and sides of vessels;—of this the *Pentalasmis vitrea* is a common example; and it may be mentioned in passing as a singular fact that the shell is composed of five pieces, in common with the Echinodermata, or Sea-eggs in popular parlance. The Mollusks are, perhaps, more familiar to us even than the Sea-nettles, although they speak to our *taste* in a different manner, and in a somewhat less elegant degree; for, although the sense of tasting may be a real satisfaction to us, and that of seeing merely productive of imaginative images, who can doubt which is superior?

Again, Oysters, Mussels, and Cockles immediately associate with them the idea of London suppers and street stalls, while the *Gasteropoda*, or Snails, leave their shiny traces on the walls of damp cellars, and the *Cephalopoda*, or Cuttle-fishes, number amongst their species some of the most formidable and unsightly monsters which inhabit the unknown depths of the ocean. The name *Cirrhopoda* is derived from the occurrence of certain flexible arms; the Latin word *cirrus* signifying a tuft of curled hair, which these animals are supposed to resemble; the termination *poda* being common to all those who have the power of attaching themselves or obtaining a *footing* on any other substance, as distinguished from those which float on the bosom of the waters. To the whole of this class of beings the name has been given of *Heterogangliata*, or as possessing a different nervous system to other classes. On opening the shells by which most of the Mollusks are protected, they are found lined with two delicate membranes, which have been termed the mantle, and which is nicely fitted to the interior of the shell. The *Branchiopoda* are furnished with arms, as the name implies, and these, in some of the species, are enormously developed, and lie concealed within the recesses of the shell, by the most at once simple and beautiful mechanism; and in some of these, which are bivalve, or composed of two shells, are observed separate and rudimentary ganglia. Another division of the *Heterogangliata* is known as the *Tunicata*, or those which appear enveloped in their mantle, without any external shell. These animals occur on most sea-coasts, and, being incapable of motion, and in fact perfectly helpless, are attached either singly or in bunches to Sea-coral or any other substance. Within, the animal is furnished with a contractile power which, when handled, presses with great force on the internal parts, and ejects water in a small stream; these go by the name of *Ascidians*.

We next come to the *Conchifera* or Oyster tribe, which are bivalves, or enclosed in two shells; and little do we think, when we swallow them so glibly, what a beautiful mechanism we devour, and how recently that mechanism has performed in perfection its living functions. Turning from these well-known animals, we encounter another family no less so, namely, the Snails, (*Helix*,) which exhibits a much higher organization, and whose re-productive powers more nearly approach those of perfect animals, which depend upon each other. Here we also find the respiratory organs in a much higher state of development, and muscular fibre is likewise present. The *Pteropoda* come next, and, as somewhat a link, I imagine, between inferior fishes and the Molluscous animals, are furnished with fins, by which they readily transport themselves from one locality to another. The *Clio borealis* is an example of this race, and more singularly-formed creatures can hardly be imagined; this may be illustrated by the fact, that no less than three hundred and sixty thousand minute suckers were counted upon the head of one of them by the aid of the microscope.

The last species which we have now to refer to is the Cuttle-fish, of which

the common Poulpe, (*Octopus vulgaris,*) and the Argonaut, whose beautiful shell is so often seen as the ornament of the marble chiffonier or lady's boudoir, are the best known. These are supplied with eyes, and tentacula or feet which are furnished with powerful suckers. The sepia of artists is a product of these creatures, and the white, hard, spongy substance which is also so familiar in the same branch of the arts. The Nautilus differs in having a shell and being a harmless creature, but all the *Cephalopoda*, or those furnished with head and feet, are of so much higher an order of organization, and will require so much more elaboration to describe, that I must defer them to my next paper.

(To be continued.)

NOTES ON THE MARINE BOTANY OF THE COAST OF NORFOLK.

BY C. H. DASHWOOD, ESQ.

(*Concluded from page* 14.)

In my last paper I noticed the various species of the class *Melanospermeæ* found on this coast, and shall now proceed to make a few notes on the *Rhodospermeæ*, the second, and by far the most extensive, class of Algæ. The *Rhodosperms* are all of some tint of red or purple, though these colours are by no means permanent, generally turning black or fading very much in the process of drying; the growing plants also in many instances lose their colours when exposed to much light, and those species which grow habitually in shallow pools, almost always assume either the brown tints of the *Fuci* or the green and yellow of the *Confervæ* and *Ulvæ*. Amongst the more common species of the first order, *Rhodomelaceæ*, found on this coast, may be mentioned *Rytiphlæa thuyoides* and *fructiculosa*, both of which are abundant on most parts of the coast. *R. pinastroides* is rather a rare species. Of the extensive genus *Polysiphonia* the following are common:—*P. urceolata, formosa, pulvinata, violacea, elongata, fibrillosa, Brodiæi, nigrescens,* and *byssoides*. *P. fibrata* and *elongella* seem rather local; the former occurs in tolerable abundance at Cromer, and the latter at Weyburn. *P. fastigiata* and *atro-rubescens* are in some seasons plentiful on many parts of the coast. *P. parasitica* is rather rare. *Bostrichia scorpioides* occurs not unfrequently in the salt-water ditches near Blakeney and Morston. The only species of *Dasya* that occurs on this coast is *D. coccinea*, which is found not unfrequently on the rocks at Cromer in the summer months. All the foregoing species belong to the first order, *Rhodomelaceæ*.

Bonnemaisonia asparagoides is found on the beach at Yarmouth, where it was first discovered by Mr. Wigg; it also occurs at Cromer and other places, though seldom in abundance. *Laurencia pinnatifida* and *L. cæspitosa* are common

everywhere in the summer; the former is known in Scotland by the name of Pepper-Dulse, from its hot biting taste. *L. obtusa* seems rather rare, or at least local; it is sometimes found plentifully between Cromer and Siderstrand. *L. dasyphylla* was first found on the Yarmouth beach by Mr. Wigg, and occurs not unfrequently along the coast from that place to Cromer. *Chrysimenia clavellosa* is found near Brancaster; I believe this Sea-weed was also first discovered on this coast by Mr. D. Turner. *Chylocladia kaliformis* is another species which was first added to the British list from specimens found on this coast by Mr. Woodward; it occurs at Yarmouth and Cromer, but not frequently. *C. articulata* is rare on this coast. *C. parvula* is found in plenty between the tide-marks at Cromer and elsewhere. *Corallina officinalis, Jania rubens,* and *Hildenbrandtia rubra* are the most common of the *Corallines*. *Melobesia polymorpha,* with *M. membranacea* and *lichenoides,* are not unfrequent on many parts of the coast, growing on other Algæ. The beautiful *Delesseria sanguinea* is common on the beach at Yarmouth. *D. sinuosa, alata, angustissima* and *Hypoglossum* are found in tolerable plenty on many parts of the coast. *D. ruscifolia* is rare. *Nitophyllum punctatum* is found in the summer months growing on other Algæ at Cromer and elsewhere. *N. laceratum* is often found with the last. *Plocamium coccineum* is very common on every part of the coast. *Rhodymenia bifida* occurs frequently at Yarmouth and Cromer. *R. laciniata* and *jubata* are often found at Yarmouth about May and June. *R. ciliata* occurs in many places in plenty. *R. palmata* is very common all round the coast. *Sphærococcus coronopifolius* must be considered a rare species; it occasionally occurs near Yarmouth. *Gracilaria confervoides* is by no means an uncommon species at Cromer and elsewhere. *Hypnea purpurascens* and *Gelidium corneum* are very common on most parts of the coast. *Gelidium crinale* appears rather a rare species. *Gigartina mamillosa, Phyllophora membranifolia, P. rubens, Gymnogongrus plicatus, Polyides rotundus, Furcellaria fastigiata, Peyssonela Dubyi,* and *Dumontia filiformis* occur frequently on many parts of the coast. *Halymenia ligulata* is occasionally found at Yarmouth and Cromer in the summer months. *Ginnania furcellata* was first discovered by Mr. Dawson Turner at Yarmouth, where it is found not unfrequently. *Kalymenia reniformis* is rarely found on this coast. *Iridæa edulis, Catenella opuntia,* and *Cruoria pellita* occur not uncommonly at Cromer. *Naccaria Wigghii* is a very rare species; it occasionally occurs on the beach at Yarmouth in the summer months, where it was first found many years since by Mr. Wigg. *Nemaleon multifidum* and *Dudresnaia Hudsoni* are by no means uncommon.

Chondrus crispus is very abundant on all parts of the coast; equally common is *Ceramium rubrum,* though this species being annual is found only in the summer and autumn months, whilst the former being a perennial occurs in the same abundance all the year round. The other species of *Ceramium* which are found on this coast are *C. nodosum, echionotum, ciliatum,* and *acanthonotum;* these occur frequently in many places in the summer

and autumn. *Griffithsia equisetifolia* and *G. setacea* often occur on the beach near Yarmouth. *G. simplicifilum* and *corallina* are also found on this coast, but far more rarely. Many species of the genus *Callithamnion* are abundant; these are *C. Turneri, tetragonum, brachiatum, polyspermum, corymbosum,* and *pedicellatum. C. roseum* was first discovered by Mr. Sowerby, growing on *Fucus vesiculosus* at the mouth of the River Yare, near Yarmouth, in August, 1797, where it occurs not unfrequently in the summer months. *C. Borreri* is a rare species on this coast; it was first found on the Yarmouth beach by Mr. Borrer, in October, 1806. *C. thuyoideum* is another species first found by Mr. Borrer on this coast: it is rare. *C. byssoideum* is found at Cromer, but is by no means common.

We now come to the third class of Algæ, the *Chlorospermeæ*. The plants of this class may be at once distinguished from all other Algæ by their bright grass-green colour. By far the greater number are found in fresh-water streams, ponds, and ditches; but, in conformity to the heading of this paper, I shall only notice the marine species. Of the first order, *Siphonaceæ*, I am aware of only two species being found on this coast, namely, *Codium tomentosum* and *Bryopsis plumosa*. I have never yet found *Vaucheria marina* on this coast, though I should fully expect its occurrence, as the plant it most frequently grows on, *Furcellaria fastigiata*, is very abundant. Amongst the *Confervaceæ*, the most common species are *Cladophora rupestris, lætevirens, arcta, glaucescens,* and *fracta. C. pellucida* occurs not uncommonly at Yarmouth, though, I believe, is not found further north. *C. flexuosa* was first discovered in the salt-water ditches near Yarmouth by Mr. D. Turner, where it is found not uncommonly; it also occurs in the salt-water ditches near Cley. *C. albida* and *lanosa* are not uncommon at Cromer. *C. flavescens* is found not unfrequently in the salt-water marshes near Yarmouth. *Rhizoclonium riparium* and *Conferva Linum* are also found in the same situation. *Conferva tortuosa* and *C. ærea* often occur on the coast, mostly at Cromer. *C. melagonium* seems a rare species on this coast. *C. collabens:* only one specimen of this beautiful Sea-weed has ever been found; it was found at Yarmouth, floating on a piece of deal, by Sir W. J. Hooker, and is, I believe, now preserved in that gentleman's herbarium; it is a much stouter plant than *C. ærea*, and of a beautiful green colour, which is well retained in the dried plant. *C. Youngana* has been found on the piers of Yarmouth jetty, but is rare. *Enteromorpha intestinalis* and *compressa* are found everywhere in abundance in the spring and summer months. *E. erecta, clathrata,* and *ramulosa* are also frequent on many parts of the coast. The remaining species which I have to notice are *Ulva latissima, U. Lactuca, U. Linza, Porphyra laciniata, P. vulgaris, Bangia fusco-purpurea, Calothrix confervicola, C. scopulorum,* and *Lyngbya flacca*, all of which occur frequently on most parts of the coast; and with these species my notes conclude.

The foregoing list contains, I believe, all the species of Algæ that are, or have been, found on this coast; and I trust it will not be without its

use to those readers of "The Naturalist" interested in this subject who may be visiting the coast of Norfolk. I had intended to make some remarks in this paper on the utility of local fauna, but Mr. Gray's opinions on this subject, in his late paper on the "Lepidoptera of the West of Scotland," so entirely coincide with mine, that any further observations would be superfluous.

Thornaye, Norfolk, February 12*th.*, 1853.

THE WHITEBAIT IN DEVONSHIRE.

The Whitebait, (*Clupea alba,*) is far more widely known, at least by name, than many other fishes of larger growth and of much more important pretensions. The conspicuous part which it yearly plays in the ministerial dinner at Greenwich, has given to it a kind of political association, and thus has sufficiently familiarized it to every newspaper reader, whether naturalist or not. But, however widely it may be known by *name*, there are perhaps few of our British fishes in *reality* less popularly known, and certainly none to which so circumscribed a *locale* has till recently been assigned; indeed, it is not long since this little fish was "promoted" to the rank of *species*, it having previously been regarded simply as either the Herring or the Shad in an early stage of its growth. The honour of discovering its true nature is due to Mr. Yarrell. A belief, in the non-naturalist world, that *Clupea alba* is peculiar to the Thames, very generally prevails, although naturalists have for some years been aware of its existence in the Southampton Water, and more recently, it is said, in a few of the rivers of the southern and eastern counties; I believe, however, that its existence so far west as Devonshire is now announced for the first time; for, although it has not escaped the notice of observers residing in the neighbourhood of the stream which I am about to mention as its habitat, as, indeed, it could hardly do, yet the opinion of its being anything more than a *Brit*, as it is locally designated, appears never to have been seriously entertained before a relation of mine, Mr. Abel Pulman, of Totnes, suspected, and last year completely satisfied himself of the fact, that it was not the *Brit*, but the veritable *Clupea alba*.

It is the River Dart, that Queen of the western rivers, which now steps in to share with Father Thames the "honour" of producing this interesting species. The part of the river in which it is found, and it swarms there in incredible numbers, is that which extends from Totnes weir to the mouth of the river at Dartmouth—a distance of about a dozen miles—being the part of the river within the influence of the tide. During the hot months the fish, in particular parts of this interval, line the sides of the river in shoals, and often attract the most indifferent observer by the singularity of their movements; ever and anon the water seems alive with their gambols, or as if hail-stones were falling thickly upon its surface. The fish are then evidently engaged in feeding upon the myriad Shrimps which occupy the places alluded

to, for the little victims spring continually above the surface in futile attempts to escape from their active and insatiable enemies. The whole of the specimens examined by Mr. Pulman contained numbers of these little *Crustacea*, more or less digested, so that the nature of the Whitebait's prey is placed beyond a doubt. The little fish itself is known, on similar evidence, to become the prey of the Bass and other larger species which inhabit this romantic stream.* Bushels upon bushels of the Whitebait are hauled ashore, during the fishing-season, in the Salmon-nets, and are left, with wasteful indifference, to rot upon the banks. A gentleman last summer ventured upon the experiment of cooking a few, by way of sample, and he pronounces them to be in every way identical—equally delicious as a piscatory *morceau*—with the far-famed Greenwich luxury.

Whether the fish remain in the river during the whole year, or otherwise, has not been ascertained; but they have been observed in March and in every succeeding month till the end of November, and the fishermen do not remember their absence from the Salmon-nets at whatever season those nets might have been used—a fact which, if it does not settle the question of time, (and of course I do not advance it with that intention,) at least speaks plainly as to the sort of *mesh* employed on the Dart in the capture of Salmon, and thus adds another instance to those which are constantly occurring of the short-sighted folly which, by using nets sufficiently small to capture the Salmon *fry* along with the parent fish, is everywhere dooming to positive extinction the princely race of *Salmo*.

The specimens of Whitebait from the Dart which have fallen under my notice appear to answer, in every particular, to the description of *Clupea alba* by Yarrell and other writers. Specimens have also been submitted to the editor of this magazine, and he has unequivocally set the seal of corroboration to the opinions on the subject which had previously been entertained, in all humility, by my relation and myself.

G. P. R. Pulman, *Crewkerne.*

If there was any doubt before as to the *Clupea alba* being in the Dart, there can be none now, for I have carefully dissected two of my specimens, and the vertebræ decide it. The only other of *Clupea* genus which has a serrated abdominal line is *Clupea Sprattus*, according to Yarrell, which has only forty-eight vertebræ, whilst of the two specimens I examined I counted in one fifty-four and in the other fifty-five. Yarrell says fifty-six; but, from the length of time mine have been kept, I may have mistaken one or two, and without the aid of a good microscope.

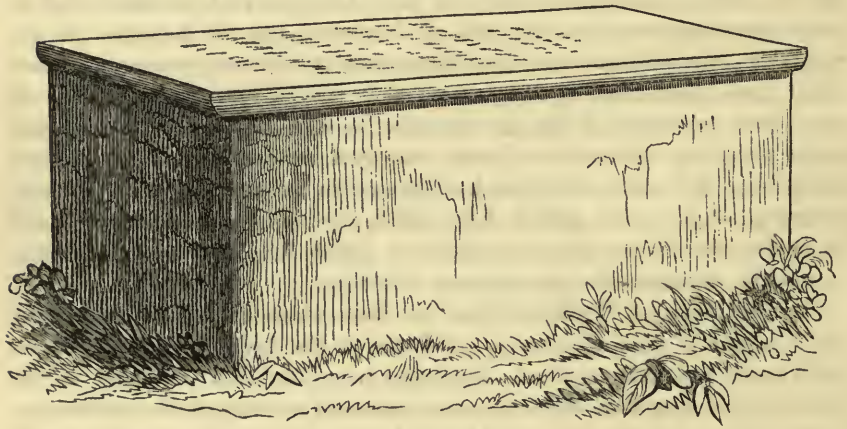
S. Hannaford, Jun., *Totnes.*

* The number of species of fish produced in the Dart is very considerable; even the Sturgeon has been captured in its waters.

ALEXANDER WILSON'S GRAVE.

From the veneration which I have long entertained for the memory of my countryman, Alexander Wilson, the American ornithologist, and whose fame, I trust, will prove more imperishable than the white marble monument under which he lies interred, in the cemetery of the Swedish Church in the city of Philadelphia, in the United States of America, I was induced to visit his grave, and to attempt a sketch of it, which I have much pleasure in forwarding to you, in the expectation that you may consider it worthy of a place in "The Naturalist," as I am not aware that any illustration of it, nor yet a correct copy of the inscription recorded thereon, has ever appeared in this country.

George Donaldson, *Glasgow, January 5th.*, 1853.



This Monument
covers the remains of
ALEXANDER WILSON,
author of the
American Ornithology.
He was born in Renfrewshire, Scotland,
on the 6th. July, 1766,
emigrated to the United States
in the year 1794,
and died in Philadelphia,
of the dysentery,
on the 23rd. of August, 1813,
aged 47.
"INGENIO STAT SINE MORTE DECUS."

Miscellaneous Notices.

Anecdote of a Horse.—For a few years back, and until last year, there was a Horse ran in the Coach between Dumfries and Moffat—a very old animal it was—I believe close on thirty years of age; and well known to every one who had occasion to travel by this conveyance. His coat was pure white, and his whole appearance indicated old age; and his evident willingness to do his best, insured respect, for "beasts as well as bodies" whatever their position in life may be, when doing their duty, are entitled to and generally command respect. On looking at this poor old Horse our Poet Burns's lines were forced on our memory; and, although we had not seen what the latter lines of the verse expresses, still I know some one must.

Tho' now thou 's dowie, stiff, and crazy,
And thy auld hide 's as white 's a daisy,
I 've seen thee dappl'd, sleak, and glaizie,
A bonny gray:
He should been tight that daur't to raize thee,
Ance in a day.

But to my story:—This same old Horse was gifted in a marvellous degree with the use of his olfactory nerves, as applied to one species of animal at least, the Red Deer. He had occasion to pass Rachills, the seat of J. J. Hope Johnstone, of Annandale, every day, a place much frequented by the Red Deer; and if any of these animals were within fifty yards or more of him, he was not slow to tell you; down went his ears, as you will observe Horses do when they bite (or try to do so) and away he went at the gallop, if allowed; whether he was pleased or pained I could not well say. Eyesight had nothing to do with the matter, because a wall higher than he could possibly see over was between him and them; and it was only by being on the top and outside of the Coach that we could see the Deer on the other side of the wall. When there were no Deer he passed along in his usual way: many a time has he drawn our attention to look out, and we never yet saw his ears go down but we saw Deer in the neighbourhood.—W. G. Johnstone, Greenbrae Cottage, Dumfries, January 14th., 1853.

The Hedgehog, (Erinaceus Europœus.)—My son having read, in the February number of "The Naturalist" (see vol. iii. page 35.) Mr. Ferris's observations on the habits of a Hedgehog, kept in a garden at Bristol, asks me to give you my own similar observations, which he has heard me relate, regarding a Hedgehog which I kept, more than twenty years ago, in Ogleforth, in this city. It was often brought into the kitchen at night, for the purpose of destroying the house-beetles, which it did most effectually; and, though at first it was alarmed when touched, and rolled itself into the figure of a ball, it soon became so bold as to extend its head and legs, when carried, and showed some impatience to be set upon the kitchen floor; and, when placed there ran off instantly in full chase, nearly at the speed of a rat. This at first much surprised me, having little expectation that the animal was capable of such speed. When the beetles became extinct, which happened soon, as the Hedgehog had an insatiable appetite for them, I fed him in the garden with bread and milk, and he got besides such worms and insects as he could find. After some time, I was much surprised to find a circle, of from three to four yards in diameter, on the grass-plot, formed by a path of the Hedgehog. The circle was very perfectly defined. The grass soon quite disappeared under the footprints and dung of the animal, so that the ring formed a striking contrast to the bright green around and within it. I at once began to watch the movements of my pet, and was soon gratified by observing him come from his dormitory, in the root of a thick lilac bush, and take his long journey on the ring. He travelled at as quick a pace as when in pursuit of the beetles in the kitchen. These excursions were continued daily, and for long periods, but I was unable to discover why they were made. Had this long-used and well-dunged track been made on a poor turf, I was satisfied that the herbage upon it when permitted to grow, must, for a length of time afterwards, have been more luxuriant, and of a darker hue, than the surrounding grass, and I thought it probable that some of the "fairy rings" which are seen in the fields, might owe their origin to the Hedgehog.—W. Whytehead, Clifton, York, February 11th., 1853.

Perhaps the *Fungi* which grow on *fairy rings*, are propagated by the Hedgehog's dung.—B. R. M.

Longevity of the Domestic Cat.—A kitten was brought to J. Gordon, Esq., of Saxlingham,

near Norwich, at the beginning of January, 1821, and lived upon his premises till March 30th., 1845, when it died from old age; thus having lived to the great age of more than twenty-four years. The circumstance was mentioned to the late Bishop of Norwich, (Bishop Stanley,) who remarked that it was the greatest age of the Cat, well-authenticated, he had heard of.—W. Barlow, Bintree, Norfolk, January, 1853.

Peregrine Falcon, (Falco peregrinus.)—A male was shot at Bawdeswell, Norfolk, in February 1850. A female was shot at Bintree in the same spring. Another was shot in the spring of 1852, at Bintree: sex not ascertained. The two last are now in the collection of F. Barlow, Esq., Cambridge.—Idem.

Pugnacity of the Golden-crested Wren, (Regulus cristatus.)—In the garden of the same gentleman, in 1849, two Golden-crested Wrens were engaged in direful contest; a female sitting on a tree near them. They fell to the ground fighting, heedless of the gardener standing close to them, who placed his hands over them, and took them into custody, carried them into the house, and imprisoned them under a wire meat cover. One soon died, when the other perched upon him, pecked him, and endeavoured to draw him round his prison. Shortly after, the conqueror shewed signs of exhaustion, was taken out and placed near an open window, but died also. The female selected a mate, and built her nest over the spot where the battle was fought.—Idem.

Longevity of the Peewit, (Vanellus cristatus,) *in confinement*.—In the summer of 1851, a Peewit was killed by a cat. This bird had been fourteen years in captivity in a walled-in garden at Yarrow, the seat of Lady James Townsend, in the Parish of Bintree, Norfolk. I knew the bird since March 1838.—Idem.

Curious situation for the nest of the House Martin, (Hirundo Urbica.)—In 1840, a Martin selected as the site for its nest the iron holdfast which supported the rain-trough of my house. I was curious to know how it would protect its young from the rain and cold. The building proceeded, and was eventually covered in with the same material with which the lower part of the nest was built, a hole being left on one side for the entrance.—Idem.

Late appearance of the Cuckoo, (Cuculus canorus.)—I beg to inform you that one of these birds was shot whilst crossing a field, in which shooting matches are held, on the evening of 23rd. September.—F. D. Soames, 80, Old Broad Street, London, September 24th., 1852.

A List of Summer Birds, arranged in the Order of their Disappearance. By T. Turner.

Swift, (Cypselus apus,) August 23rd.
Willow Wren, (Phyllopneuste trochilus,) September 1st.
Whitethroat, (Curruca cinerea,) Sept. 23rd.
Whinchat, (Saxicola rubetra,) Sept. 24th.
Marsh Reedling, (Calamoherpe arundinacea,) September 26th.
Sedge Reedling, (Calamoherpe phragmitis,) September 28th.
Lesser Whitethroat, (Curruca sylviella,) Sep. 29.
Chiff Chaff, (Phyllopneuste hippolais,) Oct. 3rd.
Wheatear, (Saxicola œnanthe,) October 3rd.
Blackcap, (Curruca atricapilla,) October 5th.
Yellow Wagtail, (Budytes Rayi,) October 3rd.
Corn Crake, (Crex pratensis,) October 14th.
Window Swallow, (Hirundo urbica,) Oct. 16th.
Chimney Swallow, (Hirundo rustica,) Oct. 19th.
Bank Swallow, (Hirundo riparia,) Oct. 23rd.

Friars, Leicester, November 12th., 1852.

The Bay-necked Goosander, (Mergus Serrator.)—November 7th.—Visiting my friend, John Collins, he showed me a fine female specimen, just stuffed, of the Bay-necked Goosander, shot November 1st., near Belvere Castle, Leicestershire.—Idem.

Lateness of the Chimney Swallow, (Hirundo rustica.)—This morning, November 7th., taking a walk at the west end of this town, although the weather was very rough, I was much surprised to see two Swallows sporting about as though it was summer.—Idem.

The House Pigeon.—Happening to observe the inquiry of John Dixon, ("The Naturalist," vol. ii, page 278,) with respect to the number of eggs laid at a nesting by the House Pigeon, I am inclined to say a few words in reply to it. My brother and I kept Pigeons, varying in number from eight to nearly forty, for some years; and, during the whole time, we met with but one nstance of a bird laying *three* eggs at a nesting. It was her first nest, and the eggs were

all unfruitful, although she had paired several weeks before. On the other hand, we had, I believe, two instances of a bird laying but one egg at a nesting. From this it would appear that two is the usual number, and that it *very seldom* varies either way. This, however, does not seem to be the case everywhere; for I well remember going with my brother to buy some young Pigeons of an old man who lived a little way off, and finding that the case with *his* birds was very different. My brother, who went up to the Dove-cot for the young ones, remarked to me, as we were returning home, that many of the nests he looked into contained *three* eggs. Now it is worthy of remark that our Pigeon-house was a spacious *garret*, and his a mere *Dove-cot* nailed against the house side; and, while ours looked to the north-east, his, if I remember rightly, faced the south-west; but whether either of these circumstances had anything to do with the matter, or whether it was owing to some peculiarity in the food of the birds, I am not able to say; I can only vouch for the fact.—HENRY FERRIS, Kingsdown, Bristol, December 27th., 1852.

Curious capture of Partridges, (Perdix cinerea.)—At the last Newmarket Houghton meeting, on Friday, the 29th. of October, and during the racing, a covey of seven Partridges flew across the Heath to the poles near the betting-stand. When they found they could not alight in consequence of the number of carriages and spectators, they continued their course, and alighted within two hundred yards of the stand, and on the bare course. One of the birds, separating from the rest, wheeled back over the heads of the mob, and by one of them was ultimately caught. Encouraged by this strange capture, many ran to the spot where the remainder had been marked, and after a series of running chases, the whole number were secured. Only one bird attempted a flight, but, alarmed at its pursuers, it dropped after rising about two yards, and in this manner the whole covey were secured.—JOHN WILLIAMSON, Jun., Emmanuel College, Cambridge, December 9th., 1852.

The Snow Bunting, (Plectrophanes nivalis.)—I shot a bird this morning in Tottenham marshes, that is seldom found so far south: it was the Snow Bunting, a male bird in its winter plumage. Although I have never met with a specimen before, I knew it directly from the illustration in "Morris's British Birds," which is most accurate.—S. H. CARTER, Tottenham, November 16th., 1852.

The Mountain Finch at Looe.—We have been visited during the last week by great numbers of Mountain Finches, (*Fringilla montifringilla.*) They are to be found daily in company with Chaffinches, in the grounds attached to Polvellan, where there is a large number of beech trees, and on the nuts of which I find them feeding. I have shot five, all of which turn out to be males. Do the sexes separate during winter, as the *F. cœlebs?* I have resided in this place upwards of twelve years, but have never observed a specimen during that time until this week. I think I am safe in saying I have seen as many as a score together.—STEPHEN CLOGG, Looe, December 4th., 1852.

The Mountain Finch, (Fringilla montifringilla.)—A fine male specimen of the Mountain Finch was shot in a garden in Macduff, near Banff, on the 1st. of November, 1852.—W. MACDUFF, Banff, November 23rd., 1852.

Blue Tit, (Parus cæruleus.)—In reply to Mr. Mc'Intosh's inquiry at page 267, vol. ii., I beg to state that I spoke to Mr. Callender's family concerning the statements made by the newspapers about the Blue-caps breeding in the stone bottle. These statements they say are quite correct. The birds have, with the one exception mentioned by Mr. Mc'Intosh, bred in the bottle every year since 1799. There is a pair of Blue-caps which breed in Mr. Robson's ticket box, at the northern junction on the Clarence line of railway, near Stockton. They had twelve young ones this last year.—W. MARTIN, Stockton-on-Tees, December 7th., 1852.

Mr. Martin kindly sent us with the above an interesting account of the whole occurrence, from the "Gateshead Observer," which we regret our space will not allow us to reprint.—B. R. M.

The Surf Scoter, (Oidemia perspicillata.)—Oliver Colt, Esq., of Rownhams, Hants., whilst shooting on the Frith of Forth, had the good fortune to bag, with various other wild fowl, a fine adult male specimen of the Surf Scoter, this last spring. It was shot in Musselburgh Bay. (Illustrated London News.)—W. MARTIN, Stockton-on-Tees, December 7th., 1852.

On the 24th. of last month, (February,) a Little Auk, *(Mergulus alle,)* was brought to me, having been found in a farm-yard in this parish, ten miles from the sea "as the Crow flies." The man who first saw it went into the house to fetch a gun, and in the interval the bird went into the stable. It was during the severe storm from the north-east which has caused such disastrous losses at sea, and has left all our part of the country covered with snow for nearly a month. The occurrence was sufficiently uncommon in itself, but I mention it the more especially, because, having at the time no opportunity of conveying the poor little bird back to its native element, which I wished to do, as it was entirely uninjured, and it being impossible to feed it properly, and being glad of it also as a specimen of a rather rare species, it occurred to me, not liking to kill it in cold blood, to try the effect of chloroform, so effective, as described in the "Aphorismata," in my "Natural History of British Butterflies," in the case of insects. The attempt was perfectly successful: I dropped a few drops of the soporific drug on a bit of cotton wool, wrapped it about the bill of the bird, and in a few seconds it was lulled without pain into the sleep from which it never awoke. I left the wool on for a considerable time, to ensure its not coming to consciousness again, and this object also was completely gained. In any similar case, I hope similar means may be adopted.—Francis Orpen Morris, Nafferton Vicarage, Driffield, March 7th., 1853.

Note on the Autumnal Moult of Colymbus glacialis.—On the 25th. of October, I observed a pair of *C. glacialis* the first time this season, swimming close together; both appeared to be in their summer livery, shewing on examination with a glass the mottled upper plumage and dark and tinged head and neck. A female was shot from the rocks near the same spot and brought to me on the 8th. of November, probably one of the same pair; it was deep in moult, most of the dark feathers of the head and neck being replaced by white ones, still leaving a dark ring around the lower part of the neck; back, scapulars, and rump retained about half the summer livery, interspersed with the gray tipped feathers of winter; wings, not yet moulted, but beautifully spotted with white on a black ground. It had a very small green shore crab whole in the gullet, and was very starved and thin, having had a succession of stormy weather some time past, from which these birds suffer severely, probably by the retirement to shelter and deeper water of the flat-fishes, etc., and crustaceans on which they usually feed. At such times I have repeatedly observed the frontal feathers erected forming a short obtuse crest, the tail usually carried high, and the whole bird shewing more than usual out of the water, probably from loss of weight or energy. These birds have the power of sinking rapidly in the water without change of position, so as to submerge their bodies below the surface. I remember some years since trying to get a rifle shot at one fishing in smooth water amongst the rocks at ebb tide, and waiting a dive, hid myself behind a rock; the bird rose at a fair distance light and buoyant, but before I could fire its quick eye detected me, and it immediately sank so far as to secure its body, and shew nothing but the neck and scapulars above water; thus effectually securing itself from the shot, which passed over it, unharmed, allowing it to pursue that life for which it is so admirably adapted, and which is so often destroyed from mere thoughtlessness on our parts.—Clement Jackson, East Looe, November 15th., 1852.

Sterna fuliginosa, (of Latham, Wilson, Bonaparte, Audubon, and Nuttall,) or Sooty Tern, was exhibited by Mr. Yarrell, at the Linnæan Society, February 15th. This bird is not only new to the British Fauna, but also to that of Europe. It was shot in October last, near Burton-on-Trent, and had been sent to Mr. Yarrell, by W. Desboast, Esq., to whose collection it belonged. Athenæum, February 19th., 1853.—J. Mc'Intosh.

Rare Birds near Plymouth.—During the severe gales of the past month the following scarce birds have occurred at Plymouth:—A fine specimen of the Fork-tailed Petrel, (*Procellaria Leachii*,) was picked up in an exhausted state off Mill-bay, by some persons passing in a boat; and not many days after the Greater or Cinereous Shearwater, (*Puffinus cinereus*,) was brought in from the Sound, captured in a similar manner and kept alive for nearly a fortnight. It remained sleepy and dull during the day, but became very restless towards night. Within the last fortnight a nice specimen of the Snow Bunting, (*Plectrophanes nivalis*,) has also been obtained in this locality.—J. Gatcombe, Plymouth, December 8th., 1852.

Rare Birds near Whitby.—Within the last two years, the following birds have been

obtained in our neighbourhood:—Two Crossbills, (*Loxia curvirostra,*) an Osprey, (*Pandion haliætus*) and a Roller, (*Coracias garrula.*)—John Braim, Sleights Bridge, Whitby, Dec. 16th. 1852.

The Puss Moth, (Cerura vinula.)—During the summer of 1850, a great many of the caterpillars of the Puss Moth were on a tree before my window. I used to stand beside the tree to watch their motions. One evening I began to tease one of them with a stalk of grass, and it became enraged. I then took my penknife and continued to touch its sides, and it seized the point of the knife in its jaws when held to its head. I still persisted in vexing it, till at last by some means or other, it squirted a quantity apparently of water in its own defence. Has any one observed anything similar, or is it a common means of defence?—W. Macduff, Banff, November 23rd., 1853.

The Scotch Argus Butterfly, (Hipparchia Blandina.)—The occurrence of this insect does not appear at any time to have been either plentiful or widely distributed over this northern country; but the late remarkably fine summer seems to have given it a range beyond its usual limits; for in Glencripsdale, on the banks of Loch Sunart, in the West Highlands, I had no difficulty in the month of June in catching just as many as I wished.—G. Donaldson, Glasgow, November 4th., 1852.

Agrotis Pascuea.—I doubt if this insect will any longer be considered a rarity, as an intelligent and most indefatigable travelling collector from London, whilst staying here captured off sugar on Cliffe-hill some eighty or ninety beautiful specimens between the 10th. and 15th. of September last; they usually paid his sugar a visit from one to two o'clock in the morning. He also took thirteen fine specimens of *Charæas cespitis* in the same locality.—W. C. Unwin, St. Ann's, Lewes, November 11th., 1852.

Chærocampa Celerio.—A tolerably good specimen of this *very rare* species was shown me to identify by the same collector, which he obtained from a labouring man, who found it in the brooks at Landport, near this town. He described it being quite perfect, and I should judge just emerged from the pupa state, but he had kept it several days under a tumbler glass, which had caused its wings and thorax to be rubbed.—Idem.

Chærocampa Celerio *near Bristol.*—Thinking a brief notice of the capture of a rare moth may not prove uninteresting to the lovers of entomology, especially as it adds a fresh locality to those given in Westwood, I imagined that you would like to insert, in "The Naturalist," that a specimen of the Sharp-winged Hawk Moth, *Chærocampa celerio*, was captured in a house at Baptist Mills, in the immediate vicinity of this city, on the 27th. of August last, when it was put alive into a box, and on the 30th. handed over to Mr. C. Harding, in whose possession it remains. From being imprisoned in a box, most probably of too small dimensions, for three days, it unfortunately had the tips of its wings, which is one of the characteristics of the genus, seriously damaged, otherwise it is in a tolerable state of preservation.—J. N. Duck, Kingsdown, Bristol, 1852.

Carabus nitens.—Two specimens of this beautiful beetle have been got, one on the road to the Cove about two miles from Aberdeen, and the other in the parish of Dunis, by Mr. Martin, who presented it to myself; and also another addition to our native coleoptera, which was got by me about two years ago, at Upper Banchoy in a pool, the *Dytiscus circumflexus*, the only one that has been obtained to my knowledge.—James Taylor, Pitmixton, February, 10th., 1853.

Gigantic Sunflower.—I reared in the garden here this summer, a Sunflower of the following dimensions:—In height it was *eleven feet five inches;* the largest part of the stem was about *eight inches round.* The flower, which was taken off at the end of September, for the purpose of preserving the seed, measured *fourteen inches in diameter*, and weighed *five pounds four ounces.*—Philip Bedingfield, Ditchingham Hall, November 10th., 1852.

Tall Star of Bethlehem, (Ornithogalum pyrenaicum.)—This rare Lily-wort is found plentifully in the Church field, at Fishbourne, a little village about a mile west of Chichester. Its flowers, which are of a greenish white, are produced in June; its seed is generally ripe in August; it grows from eighteen inches to three feet high; its bulbs are rather larger than those of a good-sized Tulip, and are about a foot beneath the surface of the soil. The leaves are all radical, linear, about four inches long, smooth, channelled, and very soon wither.—C. W. Crocker, Chichester, November, 1852.

Flowering of the Yew, (Taxus baccata.)—I was strolling last March in a valley of the South Downs, called Kingley Vale, about four miles from Chichester, when I was much surprised to see what I supposed to be columns of smoke curling up from among some fine old Yews. My curiosity being aroused to see who could be so engaged in so lonely a spot, I neared the place, and my surprise was certainly not diminished when I found that the appearance was produced by the pollen, from the innumerable flowers with which every sprig was covered.—Idem.

Review.

Agrostographia; A Treatise on the Cultivated Grasses and other Herbage and Forage Plants. By Peter Lawson and Son. Fourth Edition. Edinburgh: Private Press of P. Lawson and Son. 1853.

This is a well-executed work, containing, in the space of eighty-eight pages, a large amount of valuable information on the varieties and cultivation of herbage plants. We cannot too highly appreciate a work devoted to the spread of accurate scientific knowledge on the subject of agriculture, among a class who have too long looked upon improvement in the light of innovation, and science as less than worthless; and when this information is conveyed in such a form as to be patent to the humblest inquirer, and emanating from a quarter having such an intimate connection with the very parties sought to be enlightened, the effort is doubly enhanced in value.

The treatise under consideration is divided into three chapters. Chapter one is devoted to a consideration of the history of the introduction and cultivation of species and varieties, and contains the marrow of all that is known of the culture of plants as food for domestic herbivorous animals, from the time of the Egyptians to the present day. Chapter second "enumerates the kinds, and specifies the quantity of seed for sowing an imperial acre." This, the most practical part of the whole monograph, contains no less than sixteen tables for sowing all the different varieties of soil, from rich permanent pasture lands to loose drifting sands. The tables, as the preface informs us, are the result of a wide series of experiments and observations, extending over a period of upwards of forty years. The third and last chapter "describes, in a popular manner, the natural and artificial Grasses." Of the former there are thirty-seven, more or less valuable, and of the latter twenty. We could have wished that a firm carrying with it such authority as P. Lawson and Son, had endeavoured to rectify rather than spread the popular error which calls such plants as the Clovers, Burnet, Lucerne, and Cowslip, *artificial Grasses*. Grasses they are not; and really we are at a loss to see how any natural product can be correctly termed artificial. This chapter contains two good plates; one the common *Poa annua*, copied from Dr. Richard Parnell's admirable work on British Grasses, and the other a figure of the famous Italian Ryegrass, (*Lolium Italicum*,) introduced by the authors in 1833, and now grown all over the country.

We much regret that the small portion of our pages which we are able to devote to notices of works, prevents our indulging ourselves and our readers with any extracts. We can only say that much most valuable and practical information is on every page of this little work, which, we believe, may be safely recommended to those who wish to improve the pasturing qualities of any land they may feel interested about.

Proceedings of Societies.

THE HUDDERSFIELD NATURALISTS' SOCIETY.

TO THE EDITOR OF THE NATURALIST.

SIR,

A society is established in this town for the study of British Natural History, particularly Botany and Entomology. The society consists of about thirty members; and although we are all working men, many are subscribers to "The Naturalist," "British Birds," "The Eggs," and "The British Butterflies."

Some of our members are in possession of very extensive collections of *Lepidoptera*, collections which would not disgrace a public Museum, and I may observe that the rare moth *Chærocampa Celerio*, (Sharp-winged Hawk Moth,) was captured last October at the village of Deighton, near this town, and is now in the possession of James Mosseley, Almondbury Bank. Another specimen of this scarce moth was taken in this town a few years ago, and it is somewhat curious that they both were found in public-houses.

No part of England contains a greater variety of subjects for the lovers of Nature than this. We have already noted down above six hundred distinct species of plants within a radius of six miles from Huddersfield, and with your permission we will furnish you with a "Ramble" or two some of these days.

I remain yours, truly,
RICHARD BROOK,
President of the Huddersfield Naturalists' Society.

It is always with real pleasure that we notice the formation of Local Natural History Societies; and we are always glad to make the fact of their existence as widely known as possible. We trust all our Subscribers in the Huddersfield district will become members of, and render all the assistance in their power to the above society, which we trust will long flourish, and rapidly increase in importance.—B. R. M.

The Retrospect.

Heronries.—To prevent confusion, it may be as well to observe that the Heronry recorded at page 36, volume iii., of "The Naturalist," and said to be in "*Babingley* Wood," has been already enumerated, (page 204, volume ii.,) and is to be found in "*Wolverton* Wood," about six miles from Lynn, and two from the village of Castle Rising. I was told last spring that the keepers were destroying the Herons, as "their noise disturbed the game" whilst sitting.—T. SOUTHWELL, Fakenham, Norfolk, February 14th., 1853.

The disease of the House-fly, *(Musca domestica,)* mentioned in "The Naturalist," volume iii., page 39, has been before noticed in England; but, as it may not be generally known to your readers where they may find the Alga figured, I beg to refer them to a notice by Mr. Westwood, in the "Proceedings of the Entomological Society of London," of October 2nd., 1837, and figured in their "Transactions" plate 20, figure 2, a. b. c. Mr. Westwood supposed it to be a *fungus*. Mr. Varley, in the third volume of the "Transactions of the Microscopical Society of London," page 55, has given an interesting account of the Alga, and has figured in plate 13, the different

appearances of the plant. I have looked in vain for a figure in Dr. Hassel's "British Fresh-Water Algæ."—A. Ingpen, 12, Shawfield-Street, Chelsea, February 17th., 1853.

Colias Edusa *in Scotland*.—I beg to inform your readers, in respect to the specimen of *Colias Edusa* mentioned in the proceedings of the Natural History Society of Glasgow, at page 38 of the current volume of "The Naturalist," that it is not the first instance of its occurrence in Scotland, a specimen having been taken near Lamlash, Isle of Arran, on the 3rd. of September, 1847, by Wyville T. C. Thompson Esq., and recorded in the "Zoologist" for 1848, page 1985.—R. F. Logan, Duddingston, February 8th., 1853.

Orthagoriscus Mola.—I sent you a notice of the *Orthagoriscus Mola*, under the name of *O. truncatus*, a fact which I thought worthy of recording, from the comparative rarity of that fish; I now write to explain how it was that I recorded an erroneous statement as a fact; but the whole history will be necessary before the circumstance can be explained. Mr. John Longmuir, Jun., says "That he was induced to correct a few mistakes in the account;" he then commences to say that the fish was taken on the 17th. of September last. Now I surely made no mistake in this, for I do not say when it was caught, unless he takes the 22nd. of September for it, which was the time I wrote my note to you. If he does so, I cannot help his indiscrimination. The first information that I got of the fish, was two days after it was taken, when a fisherman came to me, asking if I could tell him the name of a very strange fish which was exhibiting in the market-place. I asked him what it was like; and from the rough, but generally good description of the man, I told him that I thought it was the "Sun-fish." I then showed him some plates of fishes, and that of the *Orthagorisci*, which he said was like it. He said that the Rev. Mr. Longmuir and his son had been down and examined it. I told him I would come on Monday night, and examine it for them, which I did, but the fish was gone. I then went immediately to the Rev. Mr. L., to see what he had made of it, when his son told me that it was the *O. truncatus*, and gave me some little description of it, which agreed nearly with that of the fisherman, which I sent to you; but the notice in your last number says, "that the Rev. Mr. L. thoroughly examined it, and ascertained its dimensions and weight;" but he should have also added, and considered it the *O. truncatus;* and as an evidence of this fact, a description of it appeared in the Aberdeen paper and the Witness of Edinburgh, under the name of *O. truncatus*, by the Rev. Mr. L.; but still I had my doubts respecting the fact, and that was the reason why I put the expression, "and have also seen the *O. Mola* taken at Aberdeen:" it would have been a strange circumstance if I had once seen the fish, but could not identify it again. However, it was well for me that I shortly after went to Montrose, for the purpose of visiting some friends there, who first accosted me about the blunder that was in the public papers, calling the fish by its wrong name, and how none of the naturalists at Aberdeen could name it. I told them that I had not seen it, but had sent a notice to "The Naturalist" that it was the *O. truncatus*, on the authority of the Rev. Mr. L. They said that they had the fish, and that James Campbell, the Curator of their Museum, was preparing it for the Arbroath one. I then went with Messrs. Kerr, Croal, and Campbell to examine it, and found it, on the first inspection, to be the *O. Mola*. I was sorry for the mistake, but I did not wish to cast a doubt on the good judgment and knowledge in Natural History of the Rev. Mr. L., so I thought it remained for him to correct the error, not me, who did not commit it, but merely took it upon his authority; and so he has done in the person of his son. On my return, I told it at our Natural History Society; some of the members no doubt conveyed the information to him, that the fish which he called the *O. truncatus* was the *O. Mola*. Four months after, he appears in "The Naturalist," saying, "that on consulting "Yarrell's British Fishes," there was not the slightest difficulty in determining the species to be the *O. Mola;*" and he gives for his reason in coming to this conclusion, the difference of "the figures of the two fishes in that work." But I may ask, why did he not see that resemblance when he and his father called it the *O. truncatus?* and as to what the excellent "Manual" of the Rev. L. Jenyns says, the same question might be put. As for the error in the measurement, that may have occurred from my misunderstanding the fisherman while giving me the account. I would not have even taken notice of this had there not been, as may be seen, something more in it than the mere misnaming a fish, and I am glad that your "Retrospect" now allows such error as I am said to have made to be corrected.—James Taylor, Pitmixton, February 10th., 1853.

BRITISH MUSEUM NATURAL HISTORY

LOCAL JOTTINGS.—No. 7.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

Instinct of the Wild Duck, (Anas boschas.)—A curious instance of instinct, or almost reason, occurred in these birds within my knowledge under the following circumstances:—A friend of mine had a couple of Wild Ducks given him which had been kept in a garden, were rather tame, and had had their wings pinioned, that is, the first joint of one of the wings taken off to prevent their flying. They were very happy for many months in their new abode—the garden, and with their liberty, to a considerable extent, disported themselves in the River Froome, which runs by his residence, always returning to be fed and go to rest. This pleasant state of existence continued until after some ten or a dozen Ducklings had been hatched, and brought up to "eatable estate"—they being pinioned in like manner as their parents; when on my friend having a couple of the progeny killed, they immediately, old and young, disappeared down the river, and have not since been heard of.

UNPRECEDENTED MILDNESS OF THE SEASON.

The Quail, (Coturnix vulgaris.)—This bright-weather visitor to our shores is seldom I believe met with in the winter. One was, however, shot in good condition at Brickland, near Weymouth, in the last week in January. I myself saw a specimen in the hands of a man, who had taken it in the snow on Tuesday, the 15th. instant, near this town. It was very poor and much reduced, but the plumage was very good.

The Crocus, (Crocus aureus.)—This pretty flower, and the Snowdrop also, (*Galanthus nivalis*,) were growing in considerable quantities and beautifully in flower in a gentleman's garden at Stinsford, near this town, on the 12th. of January, and the leaves of the Rose and Honeysuckle were fully expanded. Snowdrops were also gathered wild at a place in Fadrington, called "Mount Pleasant." The most singular instance however of the mildness of the season might have been observed on the 15th. of January, in a field near the Old Castle, Sandsfort, about a mile and a half from Weymouth, towards Portland, where men were actually busily employed cutting grass as in the spring; and upon being asked as to the crop, one of them replied, "There is as much grass here now in weight as when we cut the field in spring." This I consider worth "jotting."

Dorchester, February 16th., 1853.

MARINE ANIMALS.

MOLLUSCA.—Part II.

BY O. S. ROUND, ESQ.

(Continued from page 75.)

It was impossible in my first paper on this class of Marine Animals to do more than touch the different *genera*, amplified as the list has been of late years by the addition of an order of beings not hitherto comprehended within its limits, but which more modern naturalists have, and I think very justly, decided to belong to the same great family, and which from their comparative frequency of occurrence amongst us, possess something like a peculiar claim on our attention. I speak of the "Conchifera," of which the Oyster and Mussel, (*Mytilus edulis,*) are examples. Both these are so common that it would seem almost a work of surplusage to describe their conformation; and yet common as they are, there are very few, I believe, except purely scientific men, who are able accurately to describe their various parts, and indeed in some of these, modern discovery has been, and still continues to be active.

Now with regard to the first, we know and perceive it is true, that it is covered with a laminated shell, or a bivalve that is composed of layers, formed chiefly of calcareous matter; but what the minute conformation of those layers is, is probably still to be learned. On examining this shell, the microscope shews that it is perforated throughout like a fine cullender in the minutest conceivable manner; and that as these layers are formed, these perforations take a substantive form, and piled, one upon the other, constitute at length separate prismatic bodies, capable of being detached from each other, and forming a series of cellular formations, which are nearly in a direct course from the exterior to the interior of the shell, appearing, when under a great magnifying power, a series of hexagonal figures not unlike the plates of the shell of the Tortoise, (*Testudo.*) These are most apparent in the large species of Oyster which is so common in our markets during nearly the whole year, and which is captured chiefly on the French coast; this species being so large that the eye can almost detect the formation I have alluded to, and with ease the various degrees of development of the lamina and the calcareous deposit interspersed, and the vacancies yet unfilled. What is termed 'mother of pearl,' is so named from being the surface on which the pearls are usually found, and is a coating, in some sort, membraneous, lying in folds, and which, when spread, loses the colour, which arises in fact from a repetition of faint hues, probably of a green tendency, which produce optically the pink or crimson hue, which, as is well known, is the complimentary colour to the other, or that which the edges, or colourless adjacent portions of a green object always exhibit. All the Oyster tribe exhibit this cellular structure of the shell, and where, as sometimes happens, there is a tubular structure lying

transversely to the prismatic apertures; the tubes thus formed are bent aside to admit the aperture, and again pursue their course.

There is a very beautiful species of shell found in the Australian seas, sometimes at a considerable depth, known as a *Terebratula*. This creature is furnished with two arms, which are coiled up within the shell, which is a bivalve, as represented in Fig. 1, and can be extended at pleasure to reach

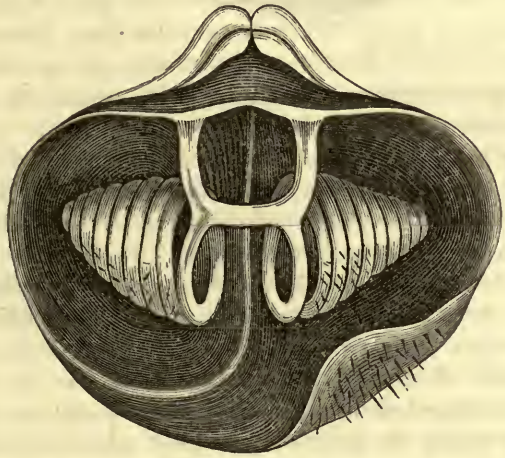


Fig. 1.—Spirifer Rostratus.

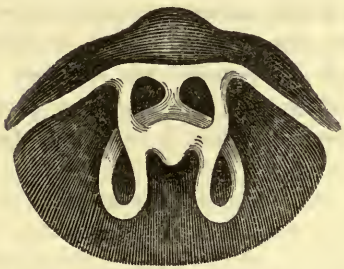


Fig. 2.—Carriage Spring, shewing a similar apparatus.

its food; the apparatus by which it is attached to the shell is known as the coach or carriage spring, (See Fig. 2.) and hence the shell has that name given to it. In these shells there is a living mantle, and they therefore come under the class *Palliobranchiata;* and in some the cellular formation is found to vary in size; and in some of these, Mr. John Quekett, the celebrated microscopist, has discovered *Cilia*, which he supposes to be used by the animal for the purpose of transmitting water from the tubes. (See Fig. 3.) In one genus, *Lingula*, (See Fig. 4.) which is of an intensely green

Fig. 3.—Portion of two Laminæ of Terebratula Shell, shewing the Cilia C C.

colour, there is a protruding process, or beak, by which the animal probably attaches itself to masses of rock or coral, and in this the cellular formation is not so regular.

Fig. 4.—Lingula.

Thus we discover in these apparently ordinary objects, wonderful and admirable structures, of which we have no conception without the aid of the glass. What wonders does this not open to us, and how insensible must he be, who once having seen the wonder in one, does not thirst to inspect more!

Before closing this paper, and as an appropriate branch of this subject, it may be as well to refer to a fact, which Mr. Quekett also has the merit of discovering, namely, the use to which the two sets of *Cilia*, observable in the gills of the common Sea Mussel, are adapted. These *Cilia* are in double rows, the one row being superior in size to the other, and these he supposes may cause the currents of water to and from the shell, whilst the smaller ones keep in motion the fluid which had been thus introduced. *Cilia* are formed in almost all parts of nature, and there can be no doubt that they answer most important purposes, although it is still an occult principle; like many other things, the universal presence of which speaks clearly to their necessity, for everything proves to us that nothing was made in vain. Ehrenberg supposes that at the globular root of each *Cilia* there are exceedingly minute muscles that give it the motion; and many others have put forth various conjectures, but the fact alone can be said to be known.

In my next paper I shall consider the structure of the creatures which inhabit these cellular shells, and then pass on to the branch of Marine Animals, (the *Echinodermata*,) which I have on a former occasion introduced to my readers.

(*To be continued.*)

BOTANICAL REMINISCENCES.

BY JOHN ROSE, ESQ., A. M., M. D., ASSISTANT SURGEON R. N.

The neighbourhood of Stirling, famous for the beauty of its scenery and its historical associations, presents a rich field for the botanist. The author of these notes spent the greater part of two summers at the Bridge of Allan, a romantic and beautifully situated village, three miles north-west of Stirling, where there is a celebrated mineral spring, which is annually resorted to by crowds of visitors in search of health and relaxation. As some of the readers of "The Naturalist" may visit this locality, we may mention that the following plants are found in the neighbourhood:—Along the banks of the Forth and Allan, and adjacent woods and fields, we have found *Ranunculus*

lingua, Alisma plantago, Poa aquatica, Hypericum quadrangulum, Scutellaria galericulata, Veronica anagallis, Epilobium hirsutum, Mentha piperita, hirsuta, and *rubra, Chrysosplenium alternifolium, Circœa lutetiana, Melampyrum pratense, Pyrola rotundifolia, Listera cordata* and *ovata, Astragalus glycyphyllus, Campanula latifolia* and *Trachelium, Œnanthe crocata, Cicuta virosa, Silene inflata, Symphytum tuberosum, Convolvulus arvensis, Potentilla reptans, Chelidonium majus, Pimpinella saxifraga, &c.* Among the fields the eye is arrested by *Echium vulgare,* with its beautiful flowers, at first of a reddish purple, and afterwards of a very brilliant blue. On the Abbey craig, a well-known cliff near Stirling, we have gathered *Geranium lucidum* and *sanguineum, Sedum Anglicum, Lychnis viscaria, Teucrium Scorodonia, Helianthemum vulgare, &c.*

On the Castle hill of Stirling we have found *Verbascum thapsus* and *lychnitis, Viola odorata, Rosa rubiginosa, Æthusa Cynapium, &c.,* and on the Castle wall, *Antirrhinum majus, Parietaria officinalis,* and *Cheiranthus incanus.* In the lake of Menteith, and in Locks Lubnaig and Katrine, (the romantic scenery of the "Lady of the Lake,") we have gathered *Nymphœa alba,* with its flowers of silvery brightness; *Nuphar lutea,* and *Lobelia Dortmanna.*

On Benledi, three thousand and nine feet above the level of the sea, to the summit of which I climbed, along with the Rev. Robert Blackwood, of Aberdeen, we found several beautiful *Saxifrages, Silene acaulis, Oxyria reniformis,* and many other alpine plants. Half way up the mountain, I remember we found the true Cranberry, (*Vaccinium oxycoccos.* I may here mention in passing that the view from the summit is magnificent, and, irrespective of the treasures of Flora found in the way, amply repays one for the fatigue of the ascent. Here you can indeed "hold converse with natures charms, and view her stores unrolled." The panorama which is there presented to the eye, is at once beautiful and sublime. On recurring to these excursions the mind is filled with the most delightful associations. As we look at the specimens in our Herbarium, they at once suggest the spot where they were gathered, and the feelings of pure delight which their discovery afforded.

> "E'en now what affections the violet awakes:
> What loved little islands twice seen in the lakes
> Can the wild water-lily restore:
> What landscapes I read in the primrose's looks;
> And what pictures of pebbled and minnowy brooks
> In the vetches that tangle their shore."

"The study of Botany," as has been well remarked, "recommends itself in various ways. It may to some extent be engaged in by individuals of either sex, and of almost every profession. The beauty of its objects, the facility with which they may be procured, and the agreeable images and associations which they call up to the mind, render the study peculiarly adapted for females." And we rejoice to know that many of our fair countrywomen are still, as in days gone by, zealous and successful botanists. There is much in the study of plants to gratify the feelings, and to touch the heart. Let us admire the power, wisdom, and goodness of the Author of Nature, as dis-

played in the structure and distribution of plants. How great is His benevolence "in spreading so diversified a loveliness over the panorama of visible things, in that He hath thrown so many walks of enchantment around us, and turned the sights and the sounds of rural scenery into the ministers of so much, and such exquisite enjoyment; and caused the outer world of matter to image forth in such profusion those various qualities, which at first had pleased and powerfully affected us in the inner world of consciousness and thought!"

These sentiments, if duly cherished and improved, will assuredly add a hundred fold to the pleasure and profit to be derived from the study of Natural History. Cheered by a sense of the Divine presence, and encouraged by the universal display of power and goodness, we shall all the more eagerly and successfully pursue the laborious, though pleasing path of scientific investigation.

"Soft roll your incense, herbs, and fruits, and flowers,
In mingled clouds to Him, whose sun exalts
Whose breath perfumes you, and whose pencil paints."

Royal Hospital at Haslar, Gosport, December, 1852.

HISTORICAL NOTES ON THE GRAPE-VINE, (*VITIS VINIFERA.*)

BY J. MC' INTOSH, ESQ.

THE cultivation of the Vine has attracted the attention of man from his birth to the present time, and on it volumes have and still continue to be written. Every part of Scripture mentions its cultivation.—So great a cultivator of the Vine was Solomon, that his vineyard at Baalhamon let for a thousand pieces of silver per annum; Noah planted vineyards and made wine. The Vine is also mentioned amongst the blessings of the promised land—"A land of wheat, and barley, and wine." "Thou hast brought the Vine out of Egypt, thou hast cast out the heathen, and planted it, and did cause it to take deep root, and it filled the land." Again, the Psalmist says, "Thy wife shall be as the fruitful Vine upon the walls of thine house." (Genesis xl.)—And the chief butler told his dream unto Joseph, and said, "In my dream, behold, a Vine was before me." The name *Gesshen* in Sacred History is given to the Vine, because of the tendrils by means of which it lays hold of its supports; hence says the prophet, (Ezekiel xv.) "Son of man, what is the Vine tree more than any tree, or than a branch which is among the trees of the forest? Shall wood be taken thereof to do any work? or will men take a pin of it to hang any vessel thereon?" Horace says on this subject—

"To the clasping Vine
Does the supporting poplar wed."

The Vine was plentiful in the land of Canaan; therefore Jacob said, when blessing his son Judah, and looking forward to the time when his numerous descendants should inhabit that part of Canaan, which afterwards received his name, (Genesis, xlix.) "Binding his foal unto the Vine, and his ass's colt unto the choice Vine, he washed his garments in wine, and his clothes in the blood

of grapes." Palestine has long been under the dominion of Mahomedan rulers, whose faith forbids the use of wine, and therefore cannot now boast of its luxuriant vineyards, which for ages had been the admiration of surrounding nations. It must be remembered that the Vine of Sodom, which is found growing in great abundance not far distant from Jericho and the Dead Sea, and, according to Bishop Lowth, produces fruit as bitter as gall, and as deadly as the poison of a serpent, alluded to by Moses, is not the *Vitis vinifera*, or the *V. Labrusca* of botanists; "For their Vine is of the Vine of Sodom, and of the fields of Gomorrah; their grapes are grapes of gall, their clusters are bitter, their wine is the poison of dragons, and the cruel venom of asps." In contradistinction to this plant our Saviour says, in the Gospel of St. John, "I am the true Vine, and my Father is the husbandman." And in the triumphal song of David, on the plagues which desolated Egypt, he says, "He destroyed their Vines with hail, and their Sycamore trees with frost." And in Deuteronomy, xxii., "Thou shalt not sow thy vineyard with divers seeds, lest the fruit of thy seed which thou hast sown, and the fruit of thy vineyard be defiled."

The Vine is found growing spontaneously on the far-famed mountain of Lebanon, and its astonishing fruitfulness is employed as a figure to illustrate the fruitfulness of the graces of the saints; hence, says Hosea, xiv., "His branches shall spread, and his beauty shall be as the olive tree, and his smell as Lebanon. They that dwell under his shadow shall return; they shall revive as the corn, and grow as the Vine, and the scent shall be as the wine in Lebanon." Dandini, an Italian traveller, was surprised at the extraordinary size of those produced in the vineyards of Lebanon, which he describes as the size of prunes, and of a most delicious flavour; and Doubdon met with very extraordinary Vines near Bethlehem. Of the size of bunches and berries produced in ancient days, we have frequent mention in Scripture.—In the 13th. Chapter of the Book of Numbers, we find it written, "And they came unto the brook Eschol, and cut down from thence a branch with one cluster of grapes, and they bore it between two upon a staff." It is the opinion of some Scriptural writers that the brook or river Eschol flowed through the valley of Sorek, which place of all others in the Holy Land produced grapes the largest and most valuable. In 1633, Eugene Roger states that he found in this valley a bunch of white grapes weighing twenty-four pounds, and observes that it was a common occurrence to find them from six to twelve pounds weight. The valley of Eschol, till within a recent date, was well cultivated as arable land and as vineyards; we are also informed that the wine given to visitors at the convent of St. John is produced from these grapes. The traveller Morrison says, "It is a white wine, and was so delicious, that on tasting it, my conscience secretly reproached me for so badly imitating the great Baptist, who in this very place, now called the valley of St. John, abstained from wine and all strong drink." In the Old Testament days it was used as a drink offering poured out before God; and, as is well known, in the New Testament days, it is used at the Lord's Supper as an emblem

of the blood of Jesus, which he shed for the salvation of mankind. "This cup is the New Testament in my blood."—(I. Corinthians, xi.)

That the ancients grew enormous grapes we have every proof in their writings. So large were they that they appear almost beyond our conception: we have nothing like them in our day. Strabo says that the Vines of Margiana were so large that two men could scarcely compass them with their arms; that the bunches of grapes they produced were a yard in length. Pliny mentions a Vine in his time that was six hundred years old; he also takes notice of the successful cultivation of the Vine by that renowned Roman grammarian, Rhemnius Palæmon, who gave six hundred thousand sesterces for a farm within ten miles of Rome, and by his improved cultivation the produce of his Vines in one year sold for four hundred thousand sesterces, and that the people far and near ran in crowds to see the huge clusters of grapes. Theophrastus mentions a Vine which grew so large that the statue of Jupiter and the columns of Juno's temple were made of it. Columella says that Seneca had a Vine which produced him yearly two thousand bunches. We are also informed that a table of large dimensions, in the house of the Duke of Montmorency, at Ecoan, is made from Vine planks; also that the cathedral doors at Raveinna are made of Vine planks, some of them twelve feet long by fifteen inches broad. Upon the coast of Barbary enormous Vines are found growing; some of them are described as being eight, nine, and ten feet in circumference. In Chios, now Scio, bunches of grapes are met with weighing forty pounds. Virgil, alluding to these Vines, says,—

> "The ritual feast shall overflow with wine,
> And Chio's richest nectar shall be thine:
> On the warm hearth, in winter's chilling hour
> We'll sacrifice; at summer, in a bower."

Nor has old England in days of yore been much behind-hand with its variable climate in producing large Vines and bunches of grapes, for we find that in 1781, His Grace the Duke of Portland made a present to the Marquis of Rockingham of a bunch that grew in one of his vineries at Welbeck, which weighed nineteen pounds and a half. It was carried suspended upon a staff the distance of twenty miles by four men. Again we find in 1821, that in the garden of the Hon. F. G. Howard, at Elford Hall, Staffordshire, a bunch of a white grape was grown to the weight of fifteen pounds. The parent of the now famous Vine at Hampton Court, at Valentine House, Essex, ripened in 1819, two thousand bunches. And at one time the great Vine at Northallerton, in Yorkshire, covered a space of one hundred and thirty-seven square yards; the circumference of the stem above the ground was three feet eleven inches.

The native country of the Vine, like most other of our cultivated fruits, is supposed to be Persia. Dr. Sickler has given a learned and curious account of its migration to Egypt, Greece, and Sicily, to which we would refer the curious reader. From Sicily it is generally supposed to have found

its way into Italy, Spain, and France. In the latter country it was in cultivation in the time of Antoninus, in the second century. In America it is found wild, and it is now, in the nineteenth century, a native in the temperate climates of both hemispheres. In the old world its culture forms a branch of rural economy, and the countries richest in Vines are Spain, Portugal, France, Italy, Austria, Styria, Corinthia, Hungary, Transylvania, and a part of Greece: still vineyards are to be found in other countries, from which good wine is made. Our own country at one time was almost covered with vineyards, from which excellent wine was made: how changed is the climate now. There is a great doubt as to the time of its introduction into Britain, which we will now endeavour to trace.—In the description which Julius Cæsar has given us in his Fifth Book of this island, no notice is taken of the Vine; Pliny is equally silent in his Sixteenth Book as to its existence in England; From hence we may conclude that the Vine did not grow in Britain either when Cæsar or Pliny wrote; and Cornelius Tacitus, writing at the time when Julius Agricola commanded here, expressly denies us the Vine. If there were no Vines in Agricola's time, it is not likely that there were any for many years after; for, although they were cultivated to some extent in Gaul, they did not find their way into Britain, for the laws of the empire would not suffer it. Domitian in his time prohibited by an edict that any new vineyards should be made even in Italy; and ordered that those in the provinces should be displanted, and that no one should plant vineyards without consent of the emperor. The reason of this was the too great plenty of wine, and the scarcity of corn; yet the emperor did not rigorously exact the observation of his edict. In regard to Britain, the Romans, at the time of the Domitian edict, were in peaceable possession of only a small portion of the south of this island, so that they could have but little time for planting Vines; yet there is no doubt that the Romans had plenty of wine, which they had brought over with them, and which they could not well live without, and no doubt they soon taught the natives the use of it.

This was the state of things until the reign of Probus, A. D. 276, who is said, in the latter part of his reign, to have restored the privilege of planting vineyards to the north and west; and about A. D. 280, the license of planting vineyards was granted to the provinces, which was very general, for we find the Pannonii, the Mœsi, as well as the Gauls, the Spaniards, and the Britons, took advantage of it; and accordingly the venerable Bede, who finished his History, A. D. 731, writes expressly on the Vine, and which account is also inserted from him in "Ralph Higden's Polychronicon," page 192, and in "Richard of Circncester," page 13; yet Ralph flatly contradicts Bede as to Vine culture in Ireland, (See Higden, page 180.)

It is the most natural idea to suppose that the cultivation of the Vine in Britain took place in the southern parts or counties, on account of their proximity to Gaul. Thus Winchester was famous for its Vines and vineyards, which town John Twyne, in his "Commentary," says, takes its name from

hence, as do many more. Somner, in his "Antiq: Canterb:" says, the neighbourhood of Canterbury was famous for its Vines, and conjectures that the street in that town called Wineeheap, took its name from being a market of wine. He also informs us that in the time of Henry de Eastry, Prior of Canterbury, A. D. 1285, that church, as well as the Abbey of St. Augustine, was plentifully furnished with vineyards; as also Colton, Beston, St. Martins, Chertham, Brook, and Hollingbourn, all manors belonging to that house, in the county of Kent. At Rochester a large piece of ground is still called 'The Vine;' also another is so called at Sevenoaks, in Kent—Sevenoaks was also the name of Baron Sandy's estate in Hampshire, now extinct, where existed a vineyard. At Halling, near Rochester, the bishop of that see had a vineyard; for when Edward II., in his nineteenth year, was at Bookingfold, Bishop Hamon, according to Lambarde, sent the king wine and grapes from his vineyard, which is now, continues the same author, a good plain meadow.—"Lambarde's Peramb: of Kent," page 419. Again in "Philipot's Villare Cantianum," page 112, we find one Captain Nicholas Toke, of Codington, in Great Chart, Kent, had so cultivated and improved his Vines, that his wine seemed not only to parallel, but almost to surpass that of France.

Stow mentions a vineyard in East Smithfield, held by the constables of London until the second year of King Stephen, to their great emolument and profit. In the records of Ely House, in Holborn, mention is made of a vineyard which formerly belonged to the bishop, and is said to have been planted on the south-east aspect, descending to the bourn or brook which now runs under Fleet-market into the Thames; and no doubt but various other parts of London have been at one time planted with Vines.* At Raleigh, in Essex, there was a vineyard which produced in good seasons twenty modii of wine: there was also one at Crowland Abbey, in Lincolnshire. At St. Edmondsbury, Middlesex, was a large one, for in the engraved plan of that town, the vineyard of the Abbey is particularly noticed: there was also one at Dunstable. In Sussex, says Lambarde, history hath mention that about the time of the Norman invasion there existed a large vineyard at Santlue, near to Battle. He also takes notice of one in the Little Park at Windsor, and observes that part of the wine was consumed in the king's household, and some sold for the king's profit. This vineyard existed so late as the reign of Richard II. William of Malmesbury has extolled the Vines and wines of Gloucestershire, (See his book De Gestis, Pont. 4, page 283, also Camden Col: 268, 269, and Bishop Gibson's insertion there.) Martin Abbot, of Peterborough, in Northamptonshire, in the reign of Stephen is said to have planted a vineyard; in fact there were few large monasteries without their orchards and vineyards. Vines have also come to perfection in both Oxfordshire and Staffordshire.

"The Vine," says Dr. Plot, (Nat: Hist: of Staff:) "has been improved by The Right Worshipful Sir Henry Lyttleton, to that advantage at Over-Orley,

* As Vine-Street in Hatton-Garden, St. Giles's, and Piccadilly; the vineyards by Houndsditch and Coldbath fields; and even within the walls of the City of London there is a street called the Vineyard.

which is situated low and warm, being surrounded with hills, that he has made wine so good there, that it has been altogether undistinguished from the best French wines by the most judicious palates. But this I suppose was done only in some favourable over-hot summers; though, if the Vines were placed advantageously, it is possible it might be done in an indifferent year; the Rev. and learned Dr. Ralph Bathurst, President of Trinity College, and Dean of Wells, having made good Claret here at Oxon, A. D. 1685, which was a very mean year for that purpose."

But there is evidence of vineyards farther north than this. There was one at Dorley Abbey, in the county of Derby; and several of the villages there are said to derive their names from the vineyards formerly flourishing there; namely, S. Winfield, N. Winfield, and Wingerworth. There was also one at Camberwell, in Surrey, at Dorking; and by far the most flourishing vineyard in England, in the year 1787, was that of Pains-hill, Cobham, in the above county, planted by Charles Hamilton, Esq., from which excellent Burgundy and Champagne were made. The tithes of the Vines of Lincombe, near Bath, were confirmed to the Abbey there in 1150, by Archbishop Theobald: this vineyard was in a flourishing state in 1720. Near Tewkesbury, is a field still called the vineyard. A messuage and land in Twyning, were held of the Lord of Tewkesbury, on certain conditions, one of which was "finding a man for sixteen days in digging in the vineyard, and gathering grapes for three days;" Ing. ad. q.d. 39, Ed. 3rd.—Fosbr. Glouc. ii., 293. The Isle of Ely was by the Normans called the Isle of Vines; and the Bishop, shortly after the conquest, is said to have received four tuns of wine annually, as tithes from the Vines in his diocese, and in his leases, he made frequent reservation of a certain quantity of wine by way of rent. In the church at Ely is the following register; or at least, some time ago existed:—

	£.	s.	d.
Exitus Vineti	2	15	3¼
Do. Vineæ	10	12	2½
10 bushels of grapes from the vineyard	0	7	6
7 dolia musti from the vineyard, 12 Edw. II.	15	1	0
Wine sold for	1	12	0
Verjuice	1	7	0
1 dolium and 1 pipe Ely, filled with new wine, &c., at			
For wine out of this vineyard	1	2	2
For verjuice from thence	0	16	0
No wine but verjuice made, 9 Edw. IV.			

From the foregoing it plainly appears that wine was made at Ely, from the production of British grown Grapes. We also find that the first Earl of Salisbury planted a vineyard in his park at Hatfield House, Hertfordshire, which was in existence in the time of Charles the First. About the year 1720, a gentleman of the name of Warner observing the Burgundy Grape ripen early, conceived an idea that it might answer for planting a vineyard,

and accordingly procured some cuttings, which he planted as standards in his garden near East-lane, Rotherhithe; though the soil was wholly unfavourable, yet by proper care and cultivation, his vineyard produced in a few years, fruit sufficiently matured to make good wine. In consequence he increased his plantation, so that his vintage yielded him above one hundred gallons of wine. From Mr. Warner's cuttings most of the English vineyards of recent date were supplied; in particular Mr. King's, at Brompton, Sir John Eyle's, at Giddy Hall, and the Earl of Tylney's, at Wanstead, in Essex.* Vineyards have also existed in Norfolk, Suffolk, Dorset, and Wilts, from which it appears good wine has been made. There were formerly, it is natural to believe, many more vineyards in Britain, but their local situations are now lost for want of being recorded; for in some situations the very Vines themselves point out to us where our forefathers cultivated them, as it is not unfrequent that the tendrils of Vines are found springing up among the grass of the fields in some counties. In fact, Dr. Plot observes that the Britons made wines anciently over (almost) all the Kingdom. The cause of the disuse and the neglect of the vineyards in England are accounted for by various writers in different ways. There can be no doubt, but our changeable climate was the only cause, or it must have been very different in those days to the present; also the cheapness and easy importation of foreign wines, and the want of land for tillage and pasturage, which are far more profitable and useful to the British nation. Nor is it to be supposed that at any one time this island produced wine enough for its consumption, although almost overrun with vineyards; for we find, that when the monasteries were in the height of riches, and their vineyards in the most flourishing condition they imported wine; (See "Philipot's Villare," page 93;) "that at Canterbury, the prior of the Trinity, now called Christ Church, received two-pence upon every vessel of wine coming in the port of Sandwich." And King Philip of France made a grant of one hundred modii of wine annually to the same Church, (Philipot's Visitation.) At the great enthronization feast of George Nevil, Archbishop of York, 6, Ed. IV. one hundred tuns of wine are said to have been consumed, and mostly imported. The priory of Dunstaple, upon the failure of malt in 1274, consumed five dolia of wine, which was imported. At the enthronization feast of Archbishop Wareham, 1504, there was provided as follows, (See Battely's Appendix, p. 27:)—

De vino rubeo vi dolia prec dol. iiii^{l}.
De vino clareto iv dol. prec dol. txxiii^{l} iiii.^{d}
De vino albo electi, unum dolium (price was £3. 6s.)
De vino albo pro coquina i dol. (the price £3.)
De malvesey i but (price £4.)
De ossey i pipe (price £3.)
De vino de Reane ii Almes. (price £1. 6s.)

* At Northfleet Vicarage, the Rev. T. Harris, A.M., so late as 1762, cultivated his vineyards of choice Vines for thirty-six years, from which he made most of his wine, and which is said to have been of a superior quality.

It is plain from the prices here mentioned that the wine was imported; and the reason so much was consumed is, it is said to have been a fish dinner, a great quantity of wine being required for the various sauces. The Egyptians ascribed the invention of wine to Osiris, the Latins to Saturn, while the Greeks elevated Bacchus to the rank of a god! And as the god of vintage of wine, and of drinkers, he is represented as crowned with the Vine, and, according to Pliny, to have been the first who ever wore a crown, of which Ovid thus takes notice:—

"————————the grapy clusters spread
On his fair brows, and dangle on his head."

5, *Middle Street, Taunton.* ————

SOMETHING ABOUT POLYPES.

BY MRS. ARTHUR ADAMS.

Continued from page 60.

Chapter II.

Imagination shall lead us now beneath the ocean, where dwell those tiny architects which have been the untiring agents of the Almighty Mind, in carrying out a portion of the grand scheme of creation. Vast districts, studded over with these flower-like animals, working unseen, unheard—yet ever toiling from ages past, to ages yet unborn, in extending the dominions of man. Slowly, yet surely, they uprear the living pile.

"High in the flood the azure dome ascends,
The crystal arch on crystal columns bends,
Roof'd with translucent shell the turrets blaze,
And far in Ocean dart their colour'd rays;
O'er the white floor successive shadows move,
As rise and break the ruffled waves above.*

To the labours of these little animals, may be traced the existence of the islands of the Polynesian Archipelago, and many in the Indian Ocean; and there are reefs not yet above the level of the sea of far greater extent than any of these, which, bye and bye, will be the foundations of new worlds, when, by volcanic agency, or other means they are raised. The Polypes sheltered by submarine rocks, have reared their dwellings till they reached the surface; after a little time they are covered with sand and mud, an island forms, gradually enlarges, and becomes higher by the accumulation of sand, and the waves of the sea have no more power over it. Winds and currents bring the germs of vegetation, and the barren rock soon becomes a fruitful spot amid the wild waste of waters, where the birds of the air build their nests, and man at length finds a home. "Thus," as Darwin remarks, "do we see the soft and gelatinous body of a *polypus*, through the agency of the vital laws, conquering the great mechanical power of the waves of an ocean, which neither the art of man nor the inanimate works of nature could successfully resist."

The generally received opinion is, that Lagoon islands, or "Atolls" have their

* Darwin's "Loves of the Plants," Canto I.

bases on submarine craters; but Darwin, in his admirable account of them in his "Naturalist's Voyage," asserts that the reef-building corals cannot live at a greater depth than twenty or thirty fathoms; and that mountains and islands which have been submerged by the ocean form rather the bases on which "the coral-insects build their radiate cells." Not only have these little animals been employed in changing the sea into dry land since the world was formed, but with them the mighty work of creation began, as is traced "in the great masses of mountain limestone, which have from ages past been exposed to all the changes and circumstances of time and chance."

"Omnipotence wrought in them, with them, by them;
Hence what Omnipotence alone could do
Worms did. * * * * *
Frail were their frames, ephemeral their lives,
Their masonry imperishable."

Thus much for the results of the labours of these Polypes; we will now inquire into their mode of accomplishing their allotted tasks; and of the differences of the several families which are dwellers in the ocean, as contrasted with the little fresh-water *Hydra* before noticed.

Those which principally build up the reefs belong to the family of *Madrepores* and *Madrephylls;* the former live in scattered cells with laminated walls, on stony, tree-like polyparies, which they form by separating the calcareous matter from the waters of the ocean, reducing it to a solid state.

"Throughout the entire series the vital agent will be found to present itself in the form of a soft gelatinous crust, wherewith the exterior of the polypary whatever may be its shape, is closely invested." The *Madrephylls* differ in the Polypes being scattered over the surface of a laminated solid polypary not tree-like. There are many other families of corals to be noticed, whose inhabitants when living, have, by their varied and gorgeous colours, made the beds of the sea vie in richness and beauty with the gayest parterres. When the eye rests upon them, through the clear transparent water on a calm day, and observes the branched corallines protruding their *Polipi* of every varied hue—green, blue, violet, and yellow, like trees covered with delicate blossoms, contrasting finely with the huge brain-shaped, flat, or mushroom-like Madrepores, one is ready to exclaim with Ehrenberg, "Where is the paradise of flowers that can rival in variety and beauty these living wonders of the ocean?"

In the family of *Alcyonians,* examples of which are abundant on our own shores, the Polypes dwell together in great numbers, studding the surface of an adherent, fleshy polypary, which is divided into two parts; the lower part is a firm substance, whilst the upper is very delicate, and divided into branches, at the end of which are seen the little Polypes spreading their eight pinnated arms, like exquisite flowers. The nutrition imbibed by one is shared by its neighbour, and each in this community contributes to the support of the whole. Another family we may call *Corals proper,* or *Cortical Polypes,* as they have been named by some authors; these differ from the *Alcyonians* in making for

themselves a solid, central, horny, or calcareous axis, with tree-like expansions covered with a living bark. The *Corallium rubrum*, or red coral, is the most interesting of this group, and I cannot do better than describe it in the words of Rymer Jones:—"In its living state this animal resembles a short stunted tree, fixed to the surface of the rock by a broadly expanded base, from which it rises, at first with a single stem of varying magnitude, which soon divides into branches, so as to resemble a leafless shrub, rising the height of about eighteen inches. The central axis of the coral is of stony hardness, insomuch indeed, that to this circumstance it owes its principal value in commerce, on account of the high polish of which it is susceptible. In the growing coral, this stony centre is entirely invested with a fleshy cortex, that constitutes the living portion of the Zoophyte, whereby the central stem is deposited, and the whole external surface is studded at intervals with Polypes." This coral is found in the Mediterranean, on the south of Sicily, in the islands of Minorca and Majorca, and on the coast of Africa.

The next families we may notice are the *Zoanthidæ*, or Animal flowers, and the Sea Anemones, or *Actiniadæ*. The former may be considered a number of *Actiniæ*, united together by a leathery substance or polypary, encrusted with foreign bodies. The Sea Anemones, on the contrary, are *free*, soft, and fleshy; their mouths surrounded by several circles of tentacles, and tinged with a beautiful variety of colours, resembling our radiated flowers, hence their English name. They are found on the shores of every sea; and the sea-side naturalist may be often richly rewarded by observing the habits of those which dwell on rocks or stones between the tide-marks, where, if undisturbed, they expand themselves in all their beauty's pride. Those in tropical waters far surpass in brilliancy the species which live in colder regions. Quoy and Gaimard relate that some of the tropical *Actiniæ* are a foot in length, and when handled produce a stinging sensation, which is even felt in the water they absorb. Like the *Hydra*, they are endowed with the power of re-production, and however divided, each part will develope a perfect flower. When their tentacles are expanded in search of prey, they are beautiful objects; but on being disturbed, they contract themselves so entirely, as to be scarcely distinguished from the surface to which they adhere. They increase prodigiously by ova or eggs; each *Actinia* possessing above a hundred ovaria, each ovary containing sixty eggs. They are likewise viviparous, as the young have been often observed issuing from the oral aperture of the parent. This wonderful fecundity is common to all the tribe of Polypes.

> "All which are made with wond'rous wise respect,
> And all with admirable beauty deckt."

These Sea Anemones are extremely voracious, feeding on small crabs, whelks, and other shells, and frequently attacking and conquering animals of greater bulk than themselves; they can, however, endure long fasting, and have been known to live a year without food. The Abbé Dicquemare, who closely

observed this family, says they might be made of great use as sea-barometers, as they foretell atmospheric changes with great certainty:—"If the Anemones be at any time shut or contracted, I have reason to apprehend an approaching storm; that is, high winds and an agitated sea. When they are all shut, but not remarkably contracted, they forbode weather somewhat less boisterous but still attended with gales and a rough sea. If they appear in the least open, or alternately, or frequently opening and closing, they indicate a mean state both of winds and waves. When they are quite open, I expect tolerable fine weather and a smooth sea. And, lastly, when their bodies are considerably extended, and their limbs diverged, they surely prognosticate fixed fair weather and a calm sea." Some of the species found in the Mediterranean are considered by the Italians as a great delicacy for the table.

The *Pennatulidæ*, or Sea-pens, form a family of Polypes, which have eight pinnate arms regularly arranged like the feather of a pen, on a long, solid, stony polypary, enveloped in a fleshy cortex; on the margins of these arms the Polyps live, which contribute to the support of this compound being. Ellis and many other naturalists assert that they have the power of locomotion, and swim in the sea; whilst others, and among them Lamarck and Dr. Johnstone, are of the opposite opinion, observing, "that when placed in a basin of sea-water, they remain in the same spot, and lie with the same side up or down just as they have been put in." They emit a beautiful phosphorescent light; and Linnæus has placed them among the wonderful productions of nature, speaking of them as "the phosphorescent Sea-pens which cover the bottom of the ocean, and there cast so strong a light, that it is easy to count the fishes and worms of various kinds sporting among them."

We will next notice the *Tubular Polypes*, which differ from the rest in the living substance being enclosed in horny or calcareous tubes which are either simple or branched. Among these will be found the families of the *Horny Corals*, the *Organ Corals*, and the *Plant-like Corals*. In the first-named, the polypary is in the form of a twisted or branched horny tube, which is thin and semi-transparent. These tubes are sometimes simple, and sometimes divided at the base; Ellis has compared them to "part of an oat-straw with the joints cut off." There is one mode by which the species of this family are increased, which I here mention, because no other zoophyte has been observed to possess it. It arises from "free or motive buds," which are produced from "the groups of little pedicles growing in the vicinity of the tentacles, which support little roundish bodies often united together in bunches, which, when mature, fall off like fruit from a tree, and are dispersed to form new colonies."

Next we come to the *Organ Corals*, so called because the Polypes dwell in calcareous tubes, arranged in stages one above another, like the pipes of an organ. These tubes are of a bright crimson hue, and the little creatures which construct them are of a vivid grass green colour, so that they exhibit a

most brilliant contrast. Lastly, there are what we will style the *Plant-like Corals*, or the family of *Sertulariidæ*, as the more scientific term them; their polypary growing in the shape of a plant rooted at its base, and variously branched, makes them appear to the uninitiated like sea-weeds. They are both beautiful in their appearance, and peculiar in their structure; their branches composed of a flexible horny material, are hollow, studded in regular rows with little cells, which are each inhabited by a Hydra-like Polype. Some idea may be formed of the vast numbers of these small animals, from a statement in Dr. Johnstone's "British Zoophytes," in regard to one of the species of this family, (*Plumularia cristata*,) from the observations of Mr. Lister. "Each plume," says he, "might comprise from four hundred to five hundred Polypi," "so that a specimen of twelve plumes contains no less than six thousand Polypes, and single specimens of *P. falcata*, or *Sertularia argentea*, may consist of eighty thousand or one hundred thousand individuals."

In the words of an old author, I conclude this cursory history of the Polype tribe:—"Verily, for mine owne part, the more I looke into nature's workes, the sooner am I induced to beleeve of her even those things that seem incredible."

Knapp's Green, Alverstoke, November 12th., 1852.

Miscellaneous Notices.

In August, 1846, one of my father's gamekeepers reported to me a pack of Black Game on the edge of a moor bordering his preserves at Avon, in Hampshire, and at the end of August I endeavoured to get some of them. I found the birds feeding with a number of Pheasants on some buckwheat; and so peculiar was their appearance, that, in spite of the keeper's protestations as to their parentage, thinking them young Pheasants, I let one or two go by me without a shot. At last however I killed a couple of them, and found them to be a hybrid, produced by a Greyhen and a cock Pheasant, as she lived in a wood with a number of the latter, whilst the keepers knew that there was no Blackcock in the neighbourhood. The birds I killed were rather like the bird figured by Yarrell, in vol. ii., page 311, especially about the tail; but although a most game-looking bird, and standing very high on the leg, I considered they were not in full plumage. The keeper reported the pack to consist of seven, but it is singular that none of them were ever seen or killed afterwards. One of them I have now stuffed, and the other I sent to Lord Malmesbury, for his collection of British Birds at Heron Court, where it now is. The Greyhen never gratified us with another brood, although she stayed in the same wood another breeding-season, and then disappeared.—Frederic Fane, Corfe Mullen, Wimborne, March 29th., 1853.

The Quail, (Coturnix vulgaris.)—I have thought it singular that, with one exception, the only occasion on which I have had opportunities of killing Quail, birds supposed to leave England for the winter months, have been in the months of December and January, in Lincolnshire, Hampshire, and Dorsetshire. Were those wounded birds, or were they acclimatized and contented with their winter quarters? In this county they are very rare; and although the extensive and highly-cultivated plain, called Fordington Field, near Dorchester, is reported to produce a bevy or two every year, I have not killed half-a-dozen in my life, although I shoot almost every day in the season in many different parts of this county and the neighbouring ones.—Idem.

Montagu's Harrier, (Circus Montagui.)—Last spring one of my father's keepers, at Avon, in Hampshire, brought me a fine specimen of Montagu's Harrier, which I have had preserved. A

few days afterwards, passing my own keeper's "gallows" at this place, I saw another still finer specimen gibbeted, which he had caught in a trap a few days previously, and which he did not appear to consider as singular; although about these parts the native talent is not very bright and observant, yet they generally report any rare bird killed. *Query*, Are they as rare in this part of England as is supposed to be the case?—Idem.

The Little Bittern, (Ardea minuta.)—I saw, the year before last, a very beautiful specimen of the Little Bittern killed at Preston, near Weymouth, which is now preserved in the collection of A. B. Foster, Esq., at Warmwell.—Idem.

Woodcocks, (Scolopax rusticola.)—As a proof of the unusual abundance of these birds this winter, I may mention that a party, lately shooting in this neighbourhood, killed in three days, and in one wood, the extraordinary number of one hundred and fifty-three; ninety being shot in one day. The numbers on the other days were thirty and thirty-three.—C. H. Dashwood, Thornaye, Norfolk, January 7th., 1853.

The Jackdaw, (Corvus monedula,)—About two years back, one of my workmen, a coach-smith, bought a nest with two young Jackdaws of one of those marauding urchins of boys, who delight in the destruction of all within their reach. He brought them to the shop, and placed them upon a shelf immediately above his bench, (he was a vice-man,) where they were constantly under his observation; they thrived well, and soon began to hop about the shop. They appeared to take great delight in perching upon the edges of the water-troughs near the forges, where they watched the motions of the fireman attending to his iron in the process of heating, and when taken out of the fire, and placed upon the anvil under the operation of the hammers, these two birds faced round, watching the process with apparently intense interest; and notwithstanding the sparks of fire flew close to them, they would only bob their heads and shake their feathers. There were several forges in the shop, but they seemed to prefer the one that did the heaviest work, which was in consequence that which displayed the greatest amount of fire and diffusion of sparks; but their strongest attachment was to the vice-man who brought them to the shop, and who fed them in their nest. For some little time he took them home on Saturday nights, and brought them back again on Monday mornings; but he discontinued doing so when they grew to maturity. If a stranger came into the shop, the male bird would descend to the ground, and immediately attack the intruder by pecking at his feet. It was frequently suggested to me that much time was wasted by the workmen in playing with these creatures, but so great is my love for Natural History, and so much amusement did these lively creatures contribute, that I could not summons resolution to order their exclusion. Frequently have I seen the vice-man mentioned, after fitting a nut upon a bolt, leave the bolt fixed in the vice with the nut screwed down; he would then shake his finger at the male bird, by way of admonition not to meddle with it; when the impudent fellow would immediately hop upon the vice, and began to unscrew the nut from the bolt with his bill, which he would accomplish by half turns at a time, looking up at the man at intervals very knowingly, and when he had got it quite off, would drop it down and return to the side of his companion, who appeared to share in his satisfaction at the exploit. There were many other instances of the sagacity of these birds, but it is unnecessary to trouble you with them; they had become so interesting to me that it was with much regret I found, upon going into the shop one Monday morning, that the female was dead: she was found floating upon the water in one of the cooling-troughs, upon the edges of which they so frequently perched. The vice-man declared it was her partner's doings, and that the villain, who was rogue enough for anything, had killed his wife. Whether it was so or not he shewed no contrition, and continued as mischievous as ever, until an occurrence took place which closed the amusing fellow's career.—It happened that a traveller from some chemical works called at the shop, offering for sale a cheap sort of grease adapted for smiths' use; the vice-man filled his grease-box with this composition; the next morning poor Jack was found lying on his back. There is no doubt but he was in the habit of feeding from the grease-pot, and some poisonous ingredient in this compound finished him.—Thomas Fuller, Bath, January 10th., 1853.

The Peregrine Falcon, (Falco peregrinus,) *laying eggs in confinement*.—A rather rare circumstance occurred in the town of Dumfries last summer, namely, a pair of Peregrine Falcons in confinement, and where they have been confined for some years, not only produced

eggs, but continued to sit on them for twelve days—the male taking his share of duty. The cause of their giving up sitting was on account of being disturbed by strangers: after this disturbance they would not again sit. It would have been most interesting to have had a pair of young Peregrines produced under such circumstances. There is every reason to believe such would have been the case from the assiduity displayed by them while they sat, had not this untoward meeting occurred. I may mention the eggs were fertile, as proved by being broken—they were too in number.—W. G. Johnstone, Greenbrae Cottage, Dumfries, Jan. 14th., 1853.

Peregrine Falcon, (Falco peregrinus.)—I have just had a very fine specimen of this somewhat scarce bird presented to me by a friend, who shot it on the 11th. of this month at Aveton Gifford, near Kingsbridge, Devon. W. G. Matthews, 4, Portland Square, Plymouth, February 15th., 1853.

Peregrine Falcon, (Falco peregrinus,) *near York*.—A very fine old female Peregrine was shot near Easingwold on January 22nd., and came into the possession of Mr. D. Graham, of this city, where I saw it in the flesh. The expanse of the wings was three feet six inches; its extreme length, one foot seven inches; length of foot, four inches and five-eighths; and it weighed two pounds two ounces. It was in very fine feather.—B. R. M., York, Feb. 8th., 1853.

Hawfinch, (Coccothraustes vulgaris,) *near York*.—A specimen of this bird was shot at Marston, by Mr. T. Dayrell, on Monday, January 31st.—Idem.

The Ivory Gull, (Larus eburneus,) *near Torquay*.—A specimen of this bird was shot on the 19th. of January, at Livermead, near Torquay. This rare Gull was seen first about the Torquay pier evidently much exhausted. It kept settling on the pier wall, and was driven off by the boys. It settled several times on the sea wall, whence it was followed to Livermead and shot. On skinning the bird, it was found to be very poor in flesh, and no doubt the late winds and stress of weather had driven it from its northern haunts. Yarrell states that the first specimen of this species found in the British Isles was in 1822. It is now in the possession of Mr. E. Burt, bird-stuffer, at 5, Higher Terrace, who has also two specimens of the Black Redstart, *(Phœnicura tithys,)* shot within a few days of the Ivory Gull. (*From the Torquay Directory, January 25th.*, 1853.)—Caleb Weeks, Torquay, January 25th., 1853.

Note on Colymbus glacialis.—This fine species has been remarkably abundant during the past month of December—ten or a dozen being no uncommon number visible from the beach; and a Preventive man tells me that he counted upwards of thirty under the lee of Looe Island at one time, mostly drifting quietly with the head resting on the back, apparently asleep—a position I have observed with a glass from the beach; and I noticed one in the early part of the month with considerable white markings still left on the back, and some dark on the chin. From the raised feathers on the head and general appearance, they have suffered much from hunger during the severe south-west gales, so prevalent throughout the month, and now depend mainly on the common Shore Crab, *(Carcinus mœnas,)* for a supply of food, of which they catch great numbers, carefully denuding obstreporous ones of their legs previous to swallowing.* I have seen one stick on the road, and violently shaken out again for a few more vigorous pecks, and then swallowed. It is very interesting to watch them fishing in a heavy surf, getting fearlessly amongst the breakers close in shore, diving easily through the heavy breaking seas, and quietly riding over such as allow it without risking a capsize. I observed one busy in a very heavy sea, during the severe storm on Dec. 27th., hunting for his breakfast as unconcerned as in a calm.—Clement Jackson, East Looe, January 10th., 1853.

The Speckled Diver, (C. septentrionalis,) has been scarce, and I have only heard of two or three specimens being observed for the winter.—Idem.

I saw two female *Mergansers*, probably *M. serrator*, swimming near the beach early in the month, but have not heard of them since.—Idem.

The Common Stormy Petrel, (Procellaria Pelagica,) was abundant last autumn. One brought me alive on the 28th. of October, was still in moult, the long quill feathers not yet cast; on being put into a large basket, it repeatedly and rapidly climbed up the side, hooking on its

* When diving unsuccessfully for food, they remain immersed one minute, as repeatedly timed by a watch, but otherwise bring their prey to the surface at once.

closed beak to assist, fluttering the while, and on arriving at the top held fast with its chin and closed mandibles till mounted safely on the edge.—Idem.

Note on the Cochin China Fowl.—This noble-looking bird has, since its introduction to this country, been the object of severe criticism by poultry admirers, not only on account of the novelty of its size, but most especially to satisfy the ever-prevailing propensity "Self-Interest," which has given rise to the question, Does it possess superior qualifications, in point of prolificity, to our more anciently-established breeds of Fowls? To those who are undecided, with regard to this question, let me introduce to them the following, calling into question the well-known maxim, "Facts are stubborn things:"—A gentleman, residing in Altrincham, has in his possession several hens and a cock of the above species of poultry. One of the hens, the subject of this communication, commenced laying when about three months and a half old, and laid, without intermission, sixty-one days, and on two of those days she laid two eggs each day, making a total of sixty-three eggs in sixty-one days, a fact which I think well worthy of note.—P. B., Stockport, February 15th., 1853.

Extraordinary Hen's Egg.—I had presented to me by the same gentleman an Egg, which was laid by a Hen no larger than a good-sized Bantam. The circumference in the long diameter was seven inches and five-eighths; short diameter, six inches.—Idem.

On the Note of the Blue Tit, (Parus cæruleus.)—Until a few months back, I was not aware that the Blue Tit could with propriety be called a songster; at the time I speak of I was living in a house in the heart of the city, but nevertheless we were daily visited by a Robin and three or four Blue Tits, which we regularly fed. My little girl, then about ten months old, was greatly amused with watching them, and knew them quite well. On one occasion I was standing with my back to the window, when I heard what I thought was the Robin singing, and said to the child, "There's Bobby;" on going to the window however I found the song proceeded from a Blue Tit, an old bird, and it continued for some time, at intervals, singing a song so like the Robin's, that unless I had been watching him, I should certainly have pronounced it that of the Robin. It was not so strong a voice as the Robin's, but the notes were very sweet; nor did it continue singing so long at one time as the Robin does, but the notes were identically the same. I had the pleasure of hearing this bird's song frequently afterwards until he paired, and domestic affairs took him from my window. I am still unaware whether this sweet song was the attribute of this individual only, or is common to the species; and whether it is confined to the spring of the year, the time when the circumstance above mentioned occurred.—B. R. M., York, January 29th., 1853.

Rare Birds near Richmond.—I observed yesterday, in a plantation near this town, a small flock of Crossbills, (*Loxia curvirostra*,) which are not uncommon visitors here. They appear especially to congregate in the vicinity of a clump of old withered Scotch firs. The only instance of the Buzzard, (*Buteo vulgaris,*) breeding in Yorkshire, which I have heard of for some time, occurred at Sedburgh, near Kendal, last summer. The nest contained three eggs, which were all preserved. I shall be glad to purchase any of the rarer sorts of eggs from any person who is disposed to part with them. Perhaps some of your correspondents can refer me to a dealer in any of our larger towns, from whom I can purchase eggs.—H. S., Richmond, Yorkshire, February 3rd., 1853.

Little Auk, (Mergulus alle,) *near Edinburgh.*—I beg to inform you that I shot a specimen of the Little Auk near Cramond, on the Frith of Forth, about four miles from Edinburgh, on the 14th. of February.—Robert H. Broughton, Edinburgh, February 21st., 1853.

Curious circumstance.—A very singular shot was made a short time since by Mr. John Cooper, a farmer at Flixton, near Bungay. He observed a Kingfisher, (*Alcedo ispida*,) sitting on a spray over a pond, and upon its rising discharged his gun, when a second crossed his line of fire, and they both fell. Mr. Cooper is a tenant of J. Crowfoot, Esq., M. D., of Beccles, to whom I am indebted for a relation of the circumstance.—A Subscriber, February 5th., 1853.

A Lark, (Alauda arvensis,) *with but one foot.*—In the last part of "The Naturalist," your Iona correspondent mentions having sometimes got birds with only one foot. Whilst at the

Isle of Man last summer, I shot a female Sky-lark minus the left foot, whilst in every other respect the bird was apparently perfectly healthy.—Thomas Kirkham, Fairfield, Manchester, February 5th., 1853.

A List of Migratory Birds seen in the neighbourhood of Needham Market, Suffolk, with the date of their first appearance in 1849-50-1-2.—By H. Lingwood.

NAME OF THE SPECIES.	1849.	1850.	1851.	1852.
Chiff Chaff, (Sylvia hippolais,)	March 31,	April 1,	April 2,	March 27,
Wryneck, (Yunx torquilla,)	April 5,	,, 6,	,, 10,	April 1,
Redstart, (Phœnicura ruticilla,)	,, 8,	,, 7,	,, 12,	,, 11,
Willow Warbler, (Sylvia trochilus,)	,, 10,	,, 3,	,, 14,	,, 5,
Garden Warbler, (Curruca hortensis,)	,, 13,	,, 24,	,, 19,	,, 15,
Common Whitethroat, (Curruca cinerea,)	,, 13,	,, 11,	,, 18,	,, 15,
Blackcap Warbler, (Curruca atricapilla,)	,, 14,	May 2,	,, 16,	,, 16,
Grasshopper Warbler, (Salicaria locustella,)	,, 15,	April 14,	,, 18,	,, 20,
Tree Pipit, (Anthus arboreus,)	,, 16,	,, 3,	,, 20,	,, 14,
Swallow, (Hirundo rustica,)	,, 22,	,, 7,	,, 16,	,, 15,
Sedge Warbler, (Salicaria phragmitis,)	,, 22,	,, 9,	,, 19,	,, 19,
Nightingale, (Philomela luscinia,)	,, 23,	,, 8,	,, 18,	,, 17,
Ray's Wagtail, (Motacilla flava,)	,, 24,	,, 20,	,, 9,	,, 17,
Sand Martin, (Hirundo riparia,)	,, 25,	,, 12,	,, 18,	,, 14,
Cuckoo, (Cuculus canorus,)	,, 27,	,, 29,	,, 18,	,, 26,
Wheatear, (Saxicola œnanthe,)	,, 28,	May 9,	,, 17,	,, 17,
Whinchat, (Saxicola rubetra,)	,, 28,	,, 9,	,, 14,	,, 17,
Lesser Whitethroat, (Curruca sylvicola,)	,, 30,	April 11,	,, 19,	,, 26,
Martin, (Hirundo urbica,)	,, 30,	,, 25,	,, 17,	,, 28,
Red-backed Shrike, (Lanius collurio,)	May 5,	May 10,	,, 17,	,, 30,
Spotted Flycatcher, (Muscicapa grisola,)	,, 30,	,, 9.	,, 17,	May 4,

As a proof of the mildness of the season it may be stated that on Friday last, (January 14th.,) a Blackbird's nest, with four eggs hatched that day, was found at Horsford, in this county.--From the Norwich Mercury, January 22nd., 1853. Hampden G. Glasspoole, Ormesby.

The Common Vapourer Moth, *(Orgyia antiqua,)* is always a common enough insect, but I have never seen or heard of its appearance, at least of that of its larvæ, in anything like the numbers in which they have appeared the present year, 1852, in the month of August, in which also I have already seen three or four specimens of the perfect Moth on the wing, one of them a bred one, while the majority are yet in the caterpillar state; an unusually early period, as I imagine, for the former. On the walls of the large flour and malt mill of Mr. Henry Thompson, of this place, pear trees are trained to the top, to the height of sixty feet. All these pear trees, three or four in particular, were infested with the caterpillars of this moth to such an extent, that the leaves were almost totally destroyed, the fruit being much injured in consequence.—F. O. Morris, Nafferton Vicarage, Driffield, August, 1852.

Reviews.

A Catalogue of the Flowering Plants and Ferns growing in the Neighbourhood of Aberdeen. By P. H. Macgillivray, A. M. Aberdeen: J. A. Wilson; London: Whittaker and Co. 1853. p. p. 44.

The value of carefully compiled local Floras and Faunas has always been acknowledged by us; and it is with much pleasure that we direct attention

to the above little work. The localities for nearly seven hundred plants are given, and the author has very judiciously discriminated those for which he himself is responsible, and those which he has given on the authority of others. To any one who may have an opportunity of collecting near Aberdeen, it will be an invaluable Pocket Companion, while to the closet naturalist it offers material assistance in working out the various problems in Botanical Geography, and to the mere collector it points out what he may hope to obtain by exchange or otherwise from any correspondent in that district. Mr. Macgillivray has evidently bestowed much labour and care on this little volume, and we shall be glad to learn that a new and probably enlarged edition is soon called for.

Herbarium Labels for the British Ferns and Allied Plants. By Thomas Moore, F. L. S., Curator of Chelsea Botanic Garden, &c. London: Groombridge and Sons.

These labels, which are intended for pasting on Herbarium covers, are printed in good, clear type, and embrace the orders, genera, species, and varieties of the Ferns and allied Plants. They appear to us well calculated for their intended use, and Mr. Moore's well-known character as a botanist is an ample guarantee for the nomenclature used.

Proceedings of Societies.

Royal Physical Society of Edinburgh.—The Royal Physical Society met on Saturday, the 12th. February, at two o'clock in the afternoon,—Hugh Miller, Esq., President, in the chair. The following donation to the library was presented, for which thanks were voted to the Liverpool Society:—"Proceedings of the Liverpool Literary and Philosophical Society, Thirty-eighth and Thirty-ninth Sessions."

The first communication laid before the meeting was,—"On some Insects from the Rocky Mountains, received from the Botanical Expedition to Oregon under Mr. Jeffrey. By Andrew Murray, Esq., W. S.

After alluding to the principal object of the exhibition, and describing some of the new *Coniferæ*, the seeds of which have been sent home, Mr. Murray, said, "When the Association was newly started, I suggested to the Committee of management that an addition might be made to its funds by admitting a limited number of entomologists, to receive Beetles instead of seeds. In spring and early summer there would be few or no seeds to collect, while that was the very best season for insects; and at other times the collecting of the two might be made compatible, by instructing the collector to make the seeds his principal, and the insects only his subordinate object. The Committee adopted the suggestion, and the allowed number of entomologists immediately came forward. Unfortunately, Mr. Jeffrey was not an entomologist, and consequently, although he has no doubt done his best, only a very small supply of insects has yet been received. These consist of a few taken near York Factory and on the way to the Rocky Mountains, a few taken at Jasper House on their east flank, and the rest taken on the west flank.

I hand round a box containing the specimens which fell to my lot, with the insects from the different quarters placed slightly apart. The insects in the first detachment are those taken near York Factory (the nearest point to this country which Mr. Jeffrey visited,) and

members will see that there is a very great resemblance between them and the insects of this country. I have placed on coloured paper one or two British specimens of the same species immediately after some of the American specimens, that members may have an opportunity of comparing them; and in these instances I think they will see that they are nearly the same. There are a considerable number of insects which are common both to North America and Europe. Kirby, in Richardson's "Fauna Boreali Americana," describes forty-nine Beetles as identical. So far as my observation goes, I should say they were too close to be specifically separated; but still that there is a slight difference, which enables a practised eye to detect which is American and which is British; but such variations I look upon merely as the effect of the difference of food and climate. The next division in the boxes contains the insects taken on the east flank of the Rocky Mountains, and among them members will see two or three very beautiful *Carabi* (which are undescribed.) The last division comprises those from the west flank of the Rocky Mountains, most of which also are undescribed. Among these will be seen a few specimens of a representative of our Blister-fly. I have placed next them, on coloured paper, the common Blister-fly of Europe. A considerable number of these Beetles was received; in fact, a greater proportion of them than of any other species; from which I infer that they are found in large numbers, in the same way as they are in Europe, and that when a great empire shall have grown up on the west of the Rocky Mountains, the apothecaries of its cities will be supplied with this essential article from their own hills. That the species has the same blistering properties as the European insect I do not in the least doubt. The specimens are too few and too valuable to allow us to pound some of them up to make the experiment, but the whole of the spirits in which the insects came home was tinged by them of their own greenish hue. The only other insects in the lot which particularly call for attention are the two which are placed last, and stand a little apart. The first is a *Carabus* of a very curious form, or rather, I should say, a new genus approaching *Carabus*. I propose to call it *apoplecticus*, from its apoplectic appearance The other small fawn-coloured insect beside it is by far the most curious of the whole. It is a species (I believe undescribed) of a most extraordinary genus of Beetles *(Nemognatha*, Lat.*)* of great rarity, and which, I imagine, few of our members have had an opportunity of seeing before. The extraordinary part of this insect is the two curling appendages at its mouth. For the benefit of those who are not entomologists I may mention, that the principal parts of the mouth of a Beetle are those which I have delineated in the rough sketch which I now show. The mandibles, or jaws, which seize and comminute the food, and the maxillæ, which are a second pair of jaws, of a thinner and finer texture, and generally furnished with hairs, and fine teeth somewhat like a comb. These maxillæ are furnished with either one or two pair of palpi attached to them. Besides these, the labium or under lip is furnished with a pair of palpi. The principal office of these, although they are to a certain extent analogous to the antennæ, is probably to perform that duty of the tongue which consists in placing and keeping the food in its proper position between the jaws during mastication. It is only, however, to the mandibles and maxillæ that I wish in this instance to direct attention. They, like the antennæ and palpi (indeed, like every part of an insect,) vary much in their forms; but however much they do so, they still bear the same relation to the rest of the body. But here we have what appears a deviation from this rule. All the other parts remain in their normal state, but the maxillæ are changed into long flexible processes, which project from the mouth. I have marked in the sketch the mandibles black, the maxillæ red, and the long processes by which they are replaced blue. These seem to be composed of a succession of rings meeting at the back. The specimen being unique, is too valuable to be sacrificed for dissection, so that I cannot say whether it is tubular or not; but it has every appearance of being so. In fact, it bears a strong resemblance to the trunk of an elephant, with the exception of the termination. Instead of having a mouth or opening, it appears to terminate in a point,—at least, with the most powerful lens, I can discover no opening at the end of the tube. This strange conversion of the maxillæ would find a parallel, were we to suppose an elephant with a pair of additional trunks (though impervious) issuing from its mouth, in place of the molar teeth. These observations have been made solely from the dried specimen. It occurred among the lot which fell to my friend Dr. Lowe, to whose kindness I owe the specimen, as well as several others of the most valuable in the box. He was at once much struck with the singular appendages I have described, and tells me they were highly flexible when taken out of the

spirits. As to their probable use, I cannot even hazard a conjecture, as we have no information regarding the habits of the insect; but I may say that, to my eye, the organ appears to have more relation to the antennæ than to anything else. A few species of this genus have been already found in North America and Mexico, as well as five or six in Africa; but they are very scarce. In the corner of the box there are a few specimens of two insects (an *Anobium*, and a *Cryptophagus*) which came home alive, feeding upon the cones, and which, however acceptable to me as an entomologist, I can honestly say I would rather have dispensed with, for the sake of my horticultural friends, who may have suffered from their ravages."

2.—Mr. R F. Logan exhibited and described various Additions to the Lepidoptera of Edinburghshire, captured during the last year. After placing at the disposal of the Society, for the use of the members, a few copies of the Catalogue of the Lepidopterous Insects of Mid Lothian, published in "The Naturalist," Mr. Logan enumerated twenty-eight additional species which had been unintentionally omitted from the list, among which were *Agrotis Lunigera*, *Eupithecia palustraria*, *Micropteryx fastuosella*, *Œcophora senescens*, and several other species of interest. He then read a list of twenty-five species added during the past summer (1852,) and exhibited the insects, among which were *Phlœodes immundana*, *Lithocolletis Messaniella*, Z., *Nepticula Argyropeza*, Z., *Gelechia politella*, Doug., *Geleehia Anthyllidella*, and *marmorea*, *Crambus Dumetellus*, and *Contaminellus*, and *Actebia Præcox*. In conclusion, he brought before the notice of the Society the plan of a work which he projected, should it meet with sufficient support, to be intituled "Illustrations of Scottish Lepidoptera," in which he intended to figure many of the rarer and more interesting species, with details of their transformations and economy. He exhibited a number of the drawings in preparation, three or four of which would form a part, to be issued quarterly; and solicited the names of subscribers, to enable him to carry out his undertaking.

3.—Mr. Hugh Miller read a Paper on the Red Sandstone, Marble, and Quartz Rock Deposits of Assynt, with their supposed organisms and probable analogues. We regret that space will not allow us to insert this very interesting paper.

At the conclusion of the meeting, James Bonar, Esq., W. S., York Place, and George Meldrum, Esq., accountant, 53, York Place, were balloted for, and unanimously elected members of the Society.

The Retrospect.

Wood Anemone, (Anemone nemorosa.)—In last month's "Retrospect" Mr. Daniell remarks that he does not "remember to have seen any Wood Anemone that was not flushed with purple." It may be the case that in such a rich county as Devon the flowers assume this bright array, but I can assure him that in the north, where limestone is scarce, the purple Anemones are the exception, whereas the white predominate. Readers who have botanized in Scotland, or in Cumberland and Westmorland, will corroborate this statement. It occurs to me that Mr. Daniell's statement tends in a great measure to bear out Mr. Rothery's opinion that the heat and "limey nature of the soil" probably assisted in producing the change in the colour of the flowers. Of course when I say that the general colour of the flowers is white, I refer to the *upper*, not the *under* surface of the petals.—J. B. Davies, Ripon, March 21st., 1853.

The Querist.

BRITISH MUSEUM NATURAL HISTORY.

I had last year some Caterpillars of the White Ermine Moth and the Vapourer Moth, feeding together in the same box, and more than once I found some of the chrysalides into which individuals of the one kind had turned, partially devoured by those of the other which were yet in the larva state. Is this an unusual circumstance?--F. O. Morris, Nafferton Vicarage, Driffield, March 28th., 1853.

OUR ZOOLOGICAL ANCESTORS, AND THEIR LABOURS IN THE FIELD OF SCIENCE.

No. I.—Joannes Goedartius.

In the present advanced state of natural science, when at length it has assumed its true position amongst philosophic minds in every civilized country —when the Naturalist sees with pleasure his favourite study making such rapid advances, from the investigations of many who are now pursuing that path, formerly trod by a few, he is led to reflect on the process, often a slow and painful one, which has led to so many and great results. Undoubtedly the first care of the student of nature, on attempting to investigate the objects of his study, ought to consist in acquiring some knowledge of the labours of his forerunners in this particular sphere; for assuredly he must sooner or later make himself versant with the rise and progress of his science, if his aim be at all higher than that of the plodding collector of natural objects, who neither knows how to use them, nor how intellectually to enjoy them. It is with pleasure and almost with veneration that the student refers to the fathers of his science, and holds converse with them in those monuments of a past era, those writings which it is no less his delight than his privilege to consult, as enabling him to appreciate and thoroughly to understand the basis and value of the accumulated knowledge of his own day.

The progress of systematic Entomology affords, perhaps, of all other branches of Natural History, a more interesting field for historical examination. The metamorphoses and peculiar structure of the little denizens of the insect world, their habits and economy, their natural affinities, their classification and rank in the scale of nature, and a thousand other points of interest, are just so many topics of slow elucidation, marked at the same time by many erroneous conclusions on the part of the early zoological writers. In this respect hardly any other department of natural science exhibits so plainly the first dawning of light, and the gradual development of truth; the circle of which, after remaining stationary from the time of Aristotle till the revival of zoology in the sixteenth and seventeenth centuries, has at length expanded under the influence of a more inquiring age, in the hands of some of the brightest intellects that have ever adorned the literature of the world.

But it is not our intention to dwell on the history of zoological science properly so called;—this has already been very ably elucidated once and again by other writers, so as to make even comment unnecessary; neither is it to give a consecutive enumeration or review of the works of the older authors, many of which are well known, or at least described at length in recent works of easy access; we propose merely to notice in these pages those early authors whose works appear to us to be little known, or which have been passed over by biographers with little more than a bare allusion. By these details we hope to instruct as well as to interest those of our readers whose

BRITISH MUSEUM NATURAL HISTORY

opportunities for consulting such books are few, or whose information on such matters may have hitherto been too circumscribed. We will also endeavour to show the influence which such works had on the study of Natural History at the time, and any practical bearings they may seem still to possess on the present state of Natural History.

Towards the middle of the seventeenth century, when zoology, as a science, had made little progress since the impetus it had received by the previous labours of Salvianus, Gesner, and two or three other cotemporaries, and while the researches of our countrymen Willughby, Ray, and Lister were being prosecuted with a zeal commensurate with their successful results, a Dutch painter, John Goedart, was quietly pursuing his enquiries into the transformations and habits of the insect tribes; a subject hitherto little understood, though not long after resumed by Redi, and elaborated and explained by the masterly genius of Swammerdam. We are not aware of the exact date of the birth of Goedart: it was certainly before the year 1620. He died in 1668. The first volume of his investigations was published at Middleburgh, in 1662, the second in 1667, and the third and last after the author's death, but without date. The size of these volumes is 12mo, and two editions seem to have been issued almost simultaneously from the press; one in Dutch, and the other in Latin. The Latin edition was executed under the editorial care of J. De Mey and Paul Veezaerdt; and, though a faithful translation of the author's text, *verbum de verbo*, as De Mey tells us, it contains in addition a good deal of irrelevant matter, the remains of the "cumbrous lore" of preceding ages. A French translation also appeared in three volumes, in 1700. Of these we consider the Latin edition the best, and to which we now refer for a few details:—

It is entitled "*Metamorphosis et Historia naturalis insectorum. Autore Joanne Goedartio. Cum Commentariis D. Joannis De Mey, &c.*" The first volume contains seventy-nine coloured plates, and two hundred and thirty six pages of text, including a Treatise by De Mey, on the Ephemera, with an additional rudely engraved plate of the perfect insect; and another Treatise on the nature of Comets. The metamorphoses of the various insects delineated by our author, which he terms "experiments," relate chiefly to the Lepidopterous tribes, though several species of Diptera are introduced, and a few Beetles; all of which are represented with a degree of accuracy, and sometimes even of beauty, that at once attests the very marked improvement now made in zoological engraving. As a sample of the species treated on, we may mention those of plates 1, 11, 21, 26, and 27, representing the transformations of *Vanessa Io*, *Pontia Brassicæ*, *Vanessa Urticæ*, *V. Atalanta*, and *Pontia Rapæ* respectively; 17, 23, and 38 *Arctia caja*, *A. lubricepeda*, and *A. Menthastri;* 2, 47, and 54 the Linnean *Muscæ tenax*, *Pyrastri*, and *cadaverina;* 43, 76, and 78 *Cassida viridis*, *Gryllotalpa vulgaris*, and *Melolontha vulgaris*. The accompanying text is a simple narrative of the habits of the larvæ in confinement, their food, and the dates of their transformations,—the sole result of observation. The second

volume is adorned by a very well engraved portrait of the author, and contains many interesting details on the transformations of insects of different orders. Thus on plates 3 and 17 we have represented *Tenthredo Rosæ* and *T. pavida;* 42, *Meloe Proscarabæus;* 51, *Saperda carcharias;* 18, *Coccinella 7-punctata;* 44, *Tipula oleracea;* 13 and 34, *Geometra urticata* and *G. sambucaria;* and plate 37 contains the larva of the Puss Moth, with its parasite *Ophion luteum.* The number of plates in this volume is fifty-one, with two hundred and fifty-nine pages of text, inclusive of a useless appendix by the editor, "de insectorum utilitate," etc.

The last volume opens with a very excellent plate of *Vanessa cardui;* plates E, K, R, and X are respectively devoted to the metamorphoses of *Notodonta ziczac, Cidaria fluctuata, Agrion Puella,* and *Tipula plumosa;* and the work closes with a figure of *Saturnia P. major,* which was sent the author from Paris, "ut originem ejus, data occasione, indagaret." The plates in this last volume are twenty in number, the text occupying forty-five pages. Upwards of a hundred additional pages are filled, by way of appendix, with the same sort of irrelevant matter which characterize the other editorial addenda of De Mey.

In 1682, an English translation of Goedart's work, by Dr. Martin Lister, was published at York, in small 4to. The plates are very accurately copied, but the figures are all reversed; and the text, which is wretchedly printed, is full of typographical errors. This edition is now rarely to be met with, only one hundred and fifty copies having been printed, as the Dr. tells us, and "which were intended only for the curious." Lister subsequently published another edition in Latin, with the same plates, in 1685, in 8vo. In these editions the insects are grouped together into sections, according to the editor's idea of their affinity; while many judicious remarks and strictures are made on Goedart's observations, sometimes Lister not hesitating to say that "the whole thing is impertinent, and not worth the recital."

As a specimen at once of the author's text, and Lister's style of translation and remarks, we will give a single extract from the English edition, page 81, where Goedart, in his "experiment" with the larva of the Vapourer Moth, goes on to say that "it changes its skin with great anxiety, wiping its sweaty body with the feather-like tufts; all the day, after the shifting of its skin, it rests without food, and all its body is very tender and soft. After it had cleansed itself well, it changed the 20th. of June, and abode in it until the 30th. of the same month, and then came forth a wretched creature, neither butterfly nor caterpillar; the reason of the defect was, that it abstained from meat before its time, its body not being arrived to that perfection requisite to its change."

Lister then adds, "The author's words must be favourably interpreted, for it is plain in the table that the animal was a butterfly; but as he well notes a starved thing; many of which I have had, whose wings were yet imperfect, or at least not in a condition to be expanded." Such appears to have been

the early ideas of the cause of apterous females in a moth, which Lister in the preceding page calls "a monster in nature, such as the birth of a bird would be without wings."

We have thus endeavoured to give some slight idea of the labours of Goedart in the field of entomology, deeming it unnecessary to enter into more details. In estimating his merits as a naturalist, we must consider rather the difficulties under which he laboured than the amount of scientific information which he gave to the world. Forty years of his life he spent in investigating the insect tribes, as we are informed; and yet how little apparent progress he made his little volumes show. But, when viewed in another light, the benefits he conferred on entomology were not small; and the history of his experiments must ever remain valuable, as being the result of observation and careful inquiry, despite the errors into which he was occasionally led. Facts were what he sought; and we in vain look for the useless hypotheses and ignorant deductions so frequently indulged in by previous writers. He had evidently no idea of system; the structure and affinities of the objects of his research had apparently been a subject with him of little interest. His little work, however, must always remain as a striking token of advancement in the direction of truth—a forerunner to that era in entomological science which was just commencing; and as such it will ever be prized by the entomologist; for, though the investigations of our author were far eclipsed in succeeding years by those of Swammerdam, Merian, and Ray, yet his accurate delineations and remarks must have been valued by them as at least a guiding-star to further observation and improvement. And even in our own day, surely it is not too much to say that these volumes may still be profitably consulted; for, though the materials were compiled from observations made two hundred years ago, yet the same laws that obtained in nature then still and must ever exist till the end of time; and while we reflect on the information which we now possess on the economy and transformations of the various tribes of the *Annulosa*, and the wide field that still opens before us in this interesting department of natural science, those who first devoted their mental energies to smooth the way for future inquiry surely claim a double portion of our regard; and of all those names in the early history of our science which it delights us to invest with many pleasing associations, there is not one that affords us more satisfaction in assigning an honourable position than that of Joannes Goedartius.

S. De V.

March 29th., 1853.

A DAY'S RAMBLE ON THE COAST OF DEVON.

BY R. A. JULIAN, ESQ., JUN.

On July 4th., 1852, accompanied by a friend, I started from Plymouth at seven, A. M., and proceeded to Newton-Ferrers, a small village near the mouth of the River Yealm, in order to procure a boat, and search for specimens along the sea-coast. On our road as we passed through Brixton, we observed the sides of a cottage chimney completely covered with the Common Polypody Fern, (*Polypodium vulgare,*) which we thought a rather peculiar habitat for it. On the walls both here and at Yealmpton, was an abundance of *Ceterach officinarum,* very luxuriant, attaining a larger size when growing on walls built without mortar, some of the fronds measuring nine inches in length. The *Asplenium Trichomanes* and *Asplenium Ruta muraria,* were flourishing aroun it. As we ascended Puslinch hill the steep banks on each side of us were clothed with *Scolopendrium vulgare,* exhibiting occasionally singular forms by the repeated branchings of its fronds. *Pteris aquilina* was of a large size, and *Athyrium Filix fœmina, Athyrium molle,* and *Athyrium convexum,* were to be seen at the same glance, the latter generally preferring the moister spots. *Aspidium angulare* and *Aspidium Filix mas* were not overlooked.

We shortly gained our boat and rowed down the River Yealm to its mouth, where in some steep cliffs hundreds of the Herring and Lesser Black-backed Gulls were breeding, their young peeping out of the crevices in the rocks, about half-fledged. These are the only two species of Gulls I have ever found breeding on our coast. With regard to the Kittiwake (*Larus tridactylus,*) and the Winter Gull, (*Larus canus,*) there seems still to exist some doubt whether they breed on the south coast of England: would it not be desirable for some Ornithologist residing there to give us the result of his experience on this subject? Other feathered inhabitants of these precipices were Kestrels, Jackdaws, and a few Ravens, and the House Martins were assiduous in their attentions to their young; the nests of the latter birds being studded thick as possible on the roofs of all the caves.

The Rock Pipit, (*Anthus petrosus,*) here plentiful, would occasionally ascend into the air whilst singing, similarly to those nearly allied species the Tree and Meadow Pipits. A Peregrine Falcon, a noble old fellow, here passed us, causing such dismay among the feathered creation that it reminded us of the old saying "The devil take the hindmost." There is every year a nest or two of this beautiful bird on some inaccessible ledge in these precipices.

On an isolated rock the Tree Mallow, (*Lavatera rarboea,*) grew in a dense mass, and between four and five feet in height; and opposite us the Fern, (*Asplenium marinum,*) occupied the smaller fissures, especially where there was dripping water. After having remained about two hours here, we crossed the estuary, and strolled along the margin of some less stupendous precipices; the notes of the Cuckoo issued from a neighbouring one, and presently out it came, closely pursued by numerous Pipits. The Cuckoo frequents these cliffs,

occasionally depositing an egg in the nest of a Rock Pipit. The gradual slope above us was profusely decorated with the Foxglove, the tops of these plants affording convenient perching-places for numerous old and young Stonechats. It is amusing to see how these birds select the highest seats, on gorse bushes, etc. Just below us on a point of rock there was an old man fishing; he had caught two Ballan Wrasse, (*Labrus bergylta*, Cuv.) each over three pounds weight: he called them "Connors," and informed us that he captured a great many between the months of April and October.

When within about one mile of Revelstoke Church, I found a quantity of that beautiful little plant, *Lotus hispidus*, Desf. It grew in company with *Ornithopus perpusillus*. *Plantago coronopus* was also abundant here, and on the rocks near the water's edge. *Plantago maritima* and *Inula crithmoides* were just coming into bloom. As the day began now to draw to a close, we hastily retraced our steps, seeing nothing worth noting but a few Common Buzzards, which passed us in their way to their roosting-places along the precipices.

Emmanuel College, Cambridge, March, 9th., 1853.

JOTTINGS AT BRIGHTON, DURING AN OCCASIONAL SOJOURN THERE.

BY STEPHEN STONE, ESQ.

Wherever we see a deficiency in the Vegetable Kingdom, we are sure to find a corresponding falling off in the Animal Kingdom; since the latter depends upon the former for support and shelter. Thus the neighbourhood of Brighton, from its extremely scanty supply of trees, hedges, or even bushes, cannot be expected to afford a very rich field for the observation of the Naturalist. Still there are times, namely, at the Vernal, and the Autumnal Equinox, when the Ornithologist may here be indulged with a passing glance at most of the migratory birds, visiting this "Gem set in the silver sea," our own fair British Isle; it being not an unfavourable point for crossing the Channel to or from a warmer clime. At other times, however, he must be content with studying the habits of a comparatively few species.

The Rock Pipit, (*Anthus petrosus*,) and the Cirl Bunting, (*Emberiza cirlus*,) are, as might naturally be expected, to be found here. The latter species, however, not having the same terrestrial habits as the former, must feel itself much less at home here, and must, methinks, be sorely put to it at times to find a comfortable roosting-place.

The Hooded or Royston Crow, (*Corvus cornix*,) may be met with here, during the winter months, in considerable flocks; they appear to draw no inconsiderable share of their sustenance from the sea shore, resorting there at low-water, for the purpose of picking up such shell-fish, etc. as may have been left there by the tide.

Various speeies of the Gull tribe, (*Laridæ,*) will be found here, exeept during the breeding season, when they mostly retire eastward. It is extremely amusing to watch these birds, on a stormy day, when the sea is more than usually rough, sitting calmly on the bosom of the deep, and riding like ships at anchor. Admirable is their eoolness! and their self-possession—admirable! for no matter how formidable in appearance an approaehing wave may be, if it is not likely to break till after it has passed them, there they sit, suffering themselves to be earried

"up and down,
From the base of the wave, to the billow's crown."

But no sooner does a wave threaten to break upon them, than the moment before it ean do so, up they spring, hovering for a few seeonds over the spray and foam, till the threatening wave has passed, when each one will be seen quietly to resume its station, "*In statu quo.*"

The fisherboys here have a eruel method of capturing these birds, whieh, useful scavengers as they are, ought rather to be protected and encouraged, than perseeuted and annoyed. Procuring a pieee of fish or offal of some sort, they stick a eouple of fish-hooks in it, to which they attaeh a line some twenty or thirty yards in length. This bait, buoyed up by eertain pieees of cork, is earried by the receding tide out to sea, as far as the line will permit. A boy having hold of the other end of the line, ensconces himself behind a boat, or other eonvenient shelter on the beaeh, looking out for a "bite." No sooner does an unfortunate Gull pereeive the tempting morsel, than down he sweeps, uneonseious of the misery he is about to entail upon himself, seizes and swallows the fatal lure; when he is of eourse hauled mereilessly to land.

But it is not by boys alone that these poor birds are perseeuted and destroyed, for there are to be found those of mature age, who, if they are not, ought to be, "come to years of diseretion," who take pleasure in wantonly shooting them; not beeause they are in want of speeimens, nor from any other justifiable motive, but simply beeause they eonsider them good marks, whereon to essay their skill. To sueh I would humbly suggest, that if they must have a moving object, at which to take aim, a common Gossamer, (*Chapeau francaise,*) thrown up into the air, is just as good a mark as a common Gull, (*Larus canus,*) on the wing. They might thus praetice shooting flying to any extent, without inflieting pain or misery upon any living creature. The only injury they eould inflict, would be upon the hat and the pocket of its owner, while they would confer a positive benefit upon the hat manufacturer.

I have here more than onee seen the eommon Partridge, (*Perdix cinerea,*) so completely "out of its element," and so perfectly bewildered thereby, as on one oeeasion to settle amongst a concourse of people assembled on the Pier head, whilst a second continued its eourse out to sea; and after flying about three furlongs settled, never of eourse to take wing again, upon the water. Whether oblivious of the nature of that element, and labouring under the delusion that it was going to alight in a green meadow, or whether it sank

from exhaustion, I will not pretend to say; I can only testify to the fact. On another occasion an individual of this species allowed itself to be taken by hand, (myself the captor,) at the other end of the Pier; having run into a kind of vault built in the cliff, in which the life-boat belonging to the Pier Company is kept.

I once witnessed here a most astonishing migration of the common Lady Bird, (*Coccinella septempunctata;*) the pier, the cliffs, railings, the walls, and windows of all the houses facing the sea, were covered with them; while the pavement was literally strewn with them for several successive days; so that walking became a most painful exercise—painful and destructive to the poor unfortunate insects, and painful to the feelings of the tender-hearted, whom business compelled, reluctantly, to march forth to their destruction; since you could not take a single step without crushing numbers of them. This astounding flight would seem to have extended along the whole line of the Kentish and Sussex coast, and to have appeared simultaneously at all the places along that line. At Margate and Ramsgate they were said to have appeared in such myriads, as that, at the latter place, several bushels of them were swept up on the Pier alone.

This migration was immediately preceded by another, not perhaps on quite so grand a scale as the last, but still the numbers composing it were immense—of some kind of hymenopterous insect; which I much regret I did not sufficiently notice at the time, to be able now to record the species. The day before the appearance of the Lady Birds, the railings and other parts of the Pier were thickly studded with these hymenoptera; they seemed to have no animation about them, but were in a dull lethargic state, refusing to make the least use of their wings. Perhaps, as might also have been the case with their successors, they came right across the Channel from the Continent; if so, their lethargy may be accounted for as the result of fatigue. However they soon recovered the use of their wings; for the next day the whole of them had disappeared, and their places were then supplied by the arrival, as before mentioned, of *Coccinella septempunctata.*

Should any Entomological reader of "The Naturalist" visit Brighton in August, either for the benefit of the sea air, for recreation, or from any other motive, and be in want of specimens of the Pearl Skipper, (*Pamphila comma,*) or the Grayling Butterfly, (*Hipparchia Semele,*) I will proceed to instruct him where he may find the former sufficiently plentiful to satisfy the reasonable desires of any individual collector; while the latter may be found in numbers sufficient for the whole body collectively; in such vast profusion have I seen them there. Let him, then, take a walk up Rose Hill, and on his right, a mile and a half or so out of the town, he will perceive some cottages surrounded with, (rare things in this neighbourhood,) plantations. Here he will find the Pearl Skipper; and on any of the Downs between this and the race course, he will find the Grayling Butterfly. I have myself with no more efficient, nor less simple apparatus than a written sheet of paper, (a letter in

fact which I happened to have in my pocket,) twisted into the shape of a funnel, caught thirty or forty specimens in a day; I of course was only able to capture them sitting, and this alone testifies to the extreme tameness of the species, since I was obliged to approach every specimen sufficiently near to "put salt upon its tail." The dry, bracing, and most delightful air on these Downs, will of itself amply repay the toil of walking to them.

Inefficient as the simple apparatus with which I took these insects undoubtedly is, I still prefer it to a hat for that purpose. True it is you may capture an insect on the wing with your hat, which you cannot do with a sheet of foolscap; but be it remembered it is one thing to get a butterfly or moth into a hat, and another to get it out again, uninjured. The former, though requiring some degree of dexterity, is comparatively easy; the latter exceedingly difficult. Thus you make a successful sweep at a rare butterfly or moth with your hat; you finish that sweep by placing the hat, almost mechanically, on your head; you congratulate yourself on having captured a beautiful specimen. True, you have captured it; there it is snug enough. But, perchance, another specimen equally rare and beautiful, crosses your path; what are you to do; your first impulse undoubtedly is, to take off your hat, and make a passing sweep at it too; but it suddenly occurs to you, that by so doing, you will in all probability place yourself in the position of the dog in the fable, who, in grasping at a shadow, lost the substance. You therefore, perhaps wisely, keep your hat on your head, and allow this last specimen to pursue its course unmolested. But it remains to be seen whether the substance in your hat will not, ere you can transfer it to your cabinet, become "the shadow of its former self;" should there chance to be a house near at hand, into which you can enter, all may be well. But it does not generally happen that rare butterflies and moths are found in the immediate neighbourhood of houses; and you may have some miles to walk ere you can place your captive in a place of safety, for assuredly it is by no means safe as yet. As you walk homeward, it may remain quiet enough for a time, but after a while it becomes restless—the closeness of the atmosphere may be oppressive to it, or that atmosphere may be charged with odours to which it has not been accustomed; so that, ever and anon, you hear it making a circuit in the upper region of your hat; this does not much disturb you perhaps, but presently you feel it fluttering about, creeping, crawling amongst your hair. You now begin to have secret misgivings as to the condition in which your captive will meet the light, and not without good reason; for however well "Rowland's Macassar" may agree with the human hair, or how much soever it may be thought to improve its appearance, it certainly does not agree with, or improve, the appearance of the "down on a butterfly's wing." The chances therefore are, that on reaching home and examining your specimen, you will find that, Chameleon like, it has completely changed its colour; or rather, that it has entirely lost all its colours. I have somewhere read of a human captive, whose hair, in the course of one single night's captivity, changed from jet

black to snowy white. Your captive insect will be found to have undergone, during the short period of its imprisonment, as great or even a greater metamorphosis. Instead of the gorgeous and beautiful thing it was when you captured it, you now behold it a mauled, miserable, dingy, dirty-looking object, which you are fain to throw away in disgust.

The beautiful Clouded Saffron Butterfly, (*Colias Edusa,*) may be taken near the sea; even on the Esplanade have I frequently seen it, where the Fern Chaffer, in July, flies in such numbers as to be extremely troublesome and annoying to those who chance to be promenading there, especially to ladies; with whose ringlets, necks, and faces they take unwarrantable liberties.

Brighthampton, near Witney, Oxon., April 14th., 1853.

BOTANICAL RAMBLES IN THE NEIGHBOURHOOD OF BRIGHTON.

NO. I.—FROM BRIGHTON TO SHOREHAM AND ERRINGHAM.

BY J. E. SMITH, ESQ.

A BRIGHT sunny morning, the wind blowing steadily from the north-east, and a sky without a single cloud—no uncommon event in the month of March—will give us a fine opportunity for our first Botanical Stroll. We cannot do better than turn our backs to the wind, and follow the Shoreham road, or rather the foot-path under this warm bank, where the sun has undiminished power, and the north-east wind seldom penetrates, but is whirled along over the beach, to pursue its wild way across the trackless ocean. Few flowers as yet dare to show themselves, although the sun has wooed them for many a day to come forth from their winter chambers. But no, they will not venture yet to put even the tips of their leaves outside their warm coverings, and remain snugly wrapped up in their manifold winding-sheets. One would almost think they heard the wind whistling, and knew that when the dark night came, there would be no sun to counteract its evil influence.

A few of the hardiest only show themselves, that seem to look out pleasantly from the dusty bank, and enjoy the cheering warmth of the sun. The little Daisy, (*Bellis perennis,*) is the boldest of them all, ever turning to the sun its merry golden eye—the *day's ee*, as our Saxon forefathers called it—and its coronet of pure white rays, like the halo of some sainted maiden, glistens in the sunlight here and there, enlivening the beach, or scattered sparingly on the bank. But what are those diminutive white specks thickly sprinkled over the beach, rivalling the stars above them with terrestrial constellations; their tiny blossoms wide open to receive the sun's genial influence? They are the Common Whitlow Grass, (*Draba verna,*) one of the earliest spring flowers, and belonging to the natural order *Cruciferæ*, or Cress tribe, which includes also the Cabbage, Turnip, Mustard, Water-cress.

and many other useful plants. The name, both in English and Latin, refers to the position of the stamens, which are six in number, set in the form of a cross, (cress,) four long ones in pairs, and two shorter placed opposite to each other. You may see plenty of these little plants in patches on the south and south-west slopes of the gentle undulations that occur on the wide part of the beach, from the toll-bar to the harbour, where the scanty herbage is gradually extending itself over the once naked pebbles; every year more beautifully decked with wild flowers.

Amongst them already may be seen the green tufts of the Common Thrift, (*Armeria maritima.*) As we pass on we may admire the pretty stars of green leaves that cover the bank on our right; they are the *Plantago coronopus,* not yet in bloom; easily distinguished from the other plaintains by its tender pinnatifid and toothed leaves, that spread out on every side from a common centre, like a many-rayed star. As we approach Southwick the bank gradually increases in height; many a plant, by no means common, lies hid there, beneath the rank grass, or has not yet burst its winter tomb.

The Common Charlock, (*Sinapis arvensis,*) another of the Cress tribe, and the farmer's pest, flaunts gaily with its yellow blossoms on this high bank, and vies in tint with the Gorse, (*Ulex Europœus,*) below it, that, as yet, is but sparingly decked

"With its flowers of scented gold."

Sir James Edward Smith, the celebrated botanist, was commencing his botanical studies by the examination of this plant, on the 10th of January, 1778, at the very moment that the spirit of the great Linnæus was leaving this lower world; which he had rendered more beautiful and intelligible to those who should come after him, by the light of order and arrangement his wonderful genius threw over the whole of nature. But here is the Shepherd's Weather-glass—the Scarlet Pimpernel, (*Anagallis arvensis,*) in a sheltered little nook, looking as lusty as a child of June; not in blossom yet, it is true; or, by its open flowers, it would tell us of the fine weather we are destined to enjoy to-day.

We may rest a few minutes on this warm bank, for the wind cannot reach us, and the grass is long, while the scenery is picturesque and animated. The tide has filled the new ship canal, several boats are sporting upon it, tacking backwards and forwards against the wind; the sun lights up their sails, and is brilliantly reflected in the water; the men are calling to each other as they pass and repass: one little streak of ocean is just visible, of dazzling brightness. In the distance, as we look down the harbour, with its red cliffs beautifully coloured by the sun, we shall see the old Norman church and town of Shoreham, with a few masts and tall chimneys rising up in agreeable contrast to the horizontal features of the landscape. It is a picture that many an artist has thought worthy of recording.

We must now take the main road till we arrive at the railway: we cross

by the Shoreham station and enter Buckingham lane. The hedges are becoming green with Nettles, Docks, and the Lords and Ladies, (*Arum maculatum;*)—we used to call them *cows and calves* in the west—the common name is Cuckoo Pint; the whole plant is full of the most acrid juice. If you pull one and carefully unwind the numerous folds of leaves, you will find in the middle a curiously rolled green spathe, within which is the cluster of male and female flowers, merely stamens and pistils without corolla or calyx, surmounted with a white spindle-shaped appendage—*spadix*, that becomes of a beautiful crimson purple or buff when the flower arrives at maturity. The juice of this plant taken into the mouth, causes a burning sensation that remains for an hour or two; the consequences, if swallowed, might be more serious, though I have known small pieces taken without injury. Of other flowers there are but few at present, except the Dandelion, (*Leontodon taraxacum,*) Ground Ivy, (*Nepeta Glechoma,*) and the little humble Celandine, (*Ranunculus ficaria.*)

Turning to the left down the lane to the windmill, we shall find the leaves of two Ferns, *Aspidium angulare* and *Scolopendrium vulgare;* further on, crossing the old Shoreham road, scattered about on the sunny side of the way, a few Scented Violets, (*Viola odorata,*) hide their heads beneath the green leaves, though scarcely in flower, but in the road leading to Little Buckingham House, in that picturesque old pit, surrounded by umbrageous elms and partially filled with water, where the road turns up over the Downs, we shall find a few more in full blossom, giving notice of their presence by a delicious fragrance even before we see their modest heads, surrounded by a rampart of nettles and brambles. The ditches, hedges, and fields are almost bare of flowers, though the bright green of the Wild Parsnip, (*Pastinaca sativa,*) enlivens the hedges with its freshness. Nothing is seen in the water-courses beyond but the stumps of *Typha angustifolia*, a plant much used by the New Zealanders in thatching their houses; it grows plentifully in the ditches that flow into the Adur; under this little bridge are a few tufts of *Enteromorpha intestinalis*, that have not yet loosened themselves from their hold in the mud; so we will follow the hedge-row on the right as far as the top of the field near Old Erringham farm, where we shall find plenty of Scented Violets of every hue, from white and purple to the deepest blue, and then rest awhile on this lovely "bank, whereon the Wild Thyme grows, the Cowslip and the nodding Violet too." Here, with the box's fragrant blossoms in his lap,

"Viridi membra sub arbuto stratus,"

the epicurean might enjoy his weed and his "pocula veteris massici," singing "Io Bacche," &c., contemplating the lovely scene before him—the vast and sparkling ocean, the winding Adur with its bridges, the green fields it fertilizes, and the "azure canopy of heaven."

But we must on to Erringham wood, formerly a rabbit-warren, where more

Violets will remind us of the poet's address to the Spring:—

"How shall I woo thee, beautiful Spring,
And what shall my offering be?
Shall I seek the sweet south, where the balmy breezo
Kisses gently the cheeks of her flowers?
Shall I bring them to thee with their perfumed leaves
And plant them within thy bowers?
Oh no! for the *Violet* that blooms at thy feet
Has a lovelier form, and a breath more sweet.

There also we shall find the Purple Flag, (*Iris fœtidissima,*) whose sword-shaped leaves we may have noticed already in the hedge-rows we have passed. Some call it roast beef, from a fancied resemblance to the odour of John Bull's favourite dish, though in reality having a much greater resemblance to certain celebrated "preserved meats" lately discovered among other old marine stores at a well-known naval station. The Cowslips are very fine in this wood; we may take them up for our town garden, then wash our hands in the stream below, and ascend to the Downs by this hollow dell or coombe. And now we are on the Downs. The wind is brisk upon these uplands, but the sun is powerful. What a sense of freedom and enjoyment on these open hills, boundless as the ocean! and what a glorious prospect! To the north and east, the wave-like, undulating Downs; to the west, the blue hills on the other side the Adur—Cisebury and Chanctonbury; up the valley, a peep into the Weald, with Bramber Castle guarding, as it were, the entrance, and far beyond, over Steyning, the high ground near Petworth; to the south, none but the poet or the artist can depict that scene; air, earth, and ocean combine to form the glorious picture. The eye wanders along the rich coast-line from beyond Worthing, sometimes even as far as the Isle of Wight, till it rests upon the Norman churches of Old Shoreham and its later namesake, nestled in their bowers of lofty elms. Again, to the south-east, over the undulating Downs, we catch a glimpse of Brighton, with its white houses creeping up the hills around it, while the race-hill bounds the prospect. Now, as we reach the brow of the hill near the windmill, the spire of Southwick comes in view, peeping out above the trees that half conceal it and its neighbour, the modest little church of Kingston, close within the shadow of whose tower, in due subordination, stands the neat and tasteful, I had almost said baronial, cottage of its literary rector, who in this retired spot has found a congenial home, where, like his favourite Sabine poet, it is his happy lot

"Integrâ
Cum mente, nec turpem senectam
Degere, nec cithara carentem."

But the white trail of steam is sweeping across the Adur bridge, reminding us that we must hasten to the railway if we would take the shortest and the easiest road to Brighton.

March, 1853.

SOME ACCOUNT OF THE LEPIDOPTERA ROUND EXETER.

BY MR. EDWARD PARFITT.

Being a new subscriber to "The Naturalist," and seeing that no one is writing from this favoured county—Devonshire, I beg to send you the result of my own experience during six years residence in Exeter; I therefore propose to give, through the pages of "The Naturalist," some account of the Entomology, Conchology, and Botany round Exeter, with an occasional visit to some other parts of Devon. I do not mean to say that my lists will be at all perfect in any one branch of the sciences before mentioned, but should this catch the eye of any one living in this neighbourhood, it may prove a stimulus to them to prosecute, if not the three branches, any one of them; for here I am almost isolated, as it were, in the midst of numerous objects of study, for I can scarcely find an individual that cares to trouble himself the least about any one subject in Natural History, that is, in regard to study. I have had several at different times, go, for a Botanical stroll, with me, and have induced them to buy a work on Botany, but directly they have opened it, and seen such a mass of hard names, as they call them, the subject has been abandoned directly; and such is precisely the way it has been with many others.

One great drawback to the study of Natural History here is, that we have no Museum in Exeter; it is a great inconvenience even to parties acquainted with any one branch of Natural History; as we have no chance of comparing specimens, which, as we all know, is very requisite, particularly to clear up certain points which it is almost impossible sometimes to convey in words. My own case for instance;—my means are very limited, and for the want of reference either to books, or what is better, authentic specimens, I have consequently in my cabinet and herbarium numerous specimens undetermined, particularly Moths, Beetles, and Fungi.

In this paper I shall confine myself entirely to the Diurnal Lepidoptera; we will begin with the spring. *Gonepteryx Rhamni*, (Brimstone Butterfly,) is generally plentiful in early spring. Then follows *Pontia Brassicæ*, (Large Cabbage Butterfly,) which is much too common, particularly in small gardens. *P. Rapæ*, (Small White:) this was remarkably plentiful last year, particularly the second brood, in July and August; I have caught dozens in a day in my garden, to destroy them; for if they were left to deposit their eggs, the caterpillars would very soon destroy the whole of our cauliflowers, cabbages, and other crops. *P. Napi*, is also very common. But *P. Sabillicæ*, (Dusky-veined White,) is comparatively scarce. *P. Metra*, (Howard's White,) is another much too common. It is a difficult matter sometimes to decide about this species, for specimens occur belonging to *P. Napi*, which border so nearly upon *P. Metra*, that it is difficult to determine to which they really belong. *P. Cardamines*, (Orange Tip,) is very common in meadows and gardens round Exeter.

Leucophasia Sinapis, (Wood White:) I took one specimen in Stoke wood last year, but I must have been a little too early, as M. Persae went there some time afterwards and caught about a dozen specimens. This Stoke wood is a very good Entomological ground; for a person with plenty of time on his hands might, with diligent searching, find some very good things there: as it is but a short distance from Exeter, some three or four miles, it is soon reached. I have no doubt but some good and rare Moths might be taken there, as it is a pretty good place for plants, consequently there is a great choice of food.

Pieris Cratægi, (Black-veined White:) though one of the habitats is given, in Dorsetshire, I have never heard of its being taken in Devon. *Melitœa Athalia*, (Pearl-bordered Likeness:) the principal habitat for this beautiful fly is given in the Naturalist's Library, as Devonshire; but I have not had the good fortune to meet with it yet, nor have I heard of its being taken by any one hereabouts. *Melitœa Euphrosyne*, (Pearl-bordered Fritillary:) this Butterfly is rather common in most seasons—on Haldon, a tract of uncultivated land about seven miles from Exeter, and at a considerable elevation above the sea level; there I have seen this Butterfly, and *M. Silene*, in great abundance, particularly the latter. Two years ago, I saw very many; I recollect the time perfectly well, for I really believe I never had such a warming before or since as I had when running after them, net in hand, on the south side of the hill, with the sun shining in all its glory, in the month of August, and scarcely a breath of air stirring at the time.

M. Silene, is also common in Stoke wood, but I have never taken the other there. *Argynnis Paphia*, (Silver-washed Fritillary:) I took a magnificent specimen at Fordlands, a rather large wood, about four miles from Exeter, on this side of Haldon, in the month of August. A male I took at Stoke wood and several others the same time; I also caught a fine male specimen at Dunsford Bridge, a favourite picknicking station on the road to Dartmoor; where the visitor is struck with the splendid wooded scenery and the rapid River Teign foaming along at its base, amidst the rocks which form its bed. The Royal Fern is seen here growing from six to seven feet in height.

Vanessa Polychloros, (Great Tortoise-shell,) is scarce in this neighbourhood; I have only seen three or four: I bred a very fine specimen last year. *V. urticæ*, (Small Tortoise-shell,) is particularly common through the summer months. *V. Io*, plentiful. *V. Atalanta* is also common in most seasons; I saw a splendid fellow spread out in the sun on the wall of Cover House, the 15th. of December last year, which showed the mildness of the season. *Cynthia Cardui*, (Painted Lady B.,) is another splendid insect which is tolerably abundant some years; three years ago it was plentiful here, and again last summer. I have heard of the Purple Emperor being seen about Dunsford, but never heard of his being caught by any one. *Hipparchia Ægeria*, (the Speckled Wood B.,) is particularly common in almost all the partially shaded glades in woods. *Hip. Megœra*, (Wall Butterfly,) is not so common as the former,

but still there are many specimens to be taken in a season. *H. Semele*, (the Grayling,) is not a common Butterfly about here: it is to be taken on Haldon, in stony places, particularly Little Haldon, at the back of Dawlish, in a gravel-pit. *Hip. Galathea*, (Marbled White:) I have heard of this beautiful fly being taken at Teignmouth, but I have not had the chance of seeing it.

Hip. Tithonus, (Large Heath,) is very common in meadows, etc. *Hip. Janira* is also very plentiful. *Hip. Hyperanthus*, (the Ringlet,) is not very common, but many specimens are to be taken in a season, on Haldon. There are several vacancies which occur here in my cabinet to be filled up some time or other, should I be spared. *Hip. Pamphilus*, (Small Heath,) is tolerable plentiful on Haldon and Stoke wood, but not so common as in Norfolk, on Mausehold heath, near Norwich; there I have seen it in great abundance. The Silver Ringlet we cannot boast, so far as I am aware.

My paper I fear is already too long, so that I must reserve the rest of the Butterflies for another paper.

Exeter, March 7th., 1853.

A LIST OF LAND AND FRESH-WATER SHELLS FOUND IN THE NEIGHBOURHOOD OF PLYMOUTH.

BY MISS SARAH S. BOLTON.

Attending to the useful hint of W. C. Unwin, Esq., advanced by him in his List of Land and Fresh-water Shells, page 54 of "The Naturalist" for March, 1853, I endeavour to write a list of such as I have observed in the neighbourhood of Plymouth, and though I am aware the list will be incomplete, yet as no previous catalogue from this locality has been forwarded to "The Naturalist," mine may not be unacceptable, and I hope by the end of the year to add to my list.

Nomenclature, Gray's Turton, (1840.)

Littorina muriatica, *Gray.*—Inhab., near small streams on the cliffs above high-water mark, at Whitsand Bay and Wembury: abundant.

Bithinia ventricosa, *Gray.*—Water near Antony: plentiful.

Vitrina pellucida, *Drap.*—Among decayed leaves, in hedge banks, and under moss at the roots of trees: of frequent occurrence, but not plentiful.

Helix aspersa, *Muller.*—Everywhere: specimens near the sea paler and somewhat more solid.

Helix hortensis, *Lister.*—Very plentiful in every hedge-row.

Helix nemoralis, *Linn.*—In hedge banks, and on slate and limestone rocks. plentiful. Specimens occasionally occur with the peristome white.

Helix pulchella, *Muller.*—At the roots of grass on the slopes of the Hoe.

Helix fusca, *Mont.*—On umbelliferous plants, in the grounds of Mr. Cornish, of Black Hall, and in the hedge-row of the lane leading to North Huish church: rare.

Helix aculeata, *Muller.*—Very rare: one specimen only, which I found on decayed wood in Mr. Cornish's grounds.

Helix granulata, *Gray.*—Very plentiful in hedge banks and among nettles.

Helix hispida, *Muller.*—Under stones in the shade and among nettles and leaves in Mount Edgecombe Park and other localities: not very common.

Helix concinna, *Gray.*—Hedge banks, Magazine Lane: not common.

Helix depilata, *Pfei.*—Under nettles and in reach of the droppings from the eaves of Ford House, Stoke.

Helix rufescens, *Penn.*—Exceedingly common, the varieties, white, mottled, grey, and rufous: found on hedge banks, under wood, among nettles, and in gardens at the roots of *Vinca* and *Iris.*

Helix virgata, *Mont.*—Four varieties, the banded, the deep buff, the opaque with pellucid bands (this is very pretty,) and the white; the buff and banded are very abundant, and frequently of a large size.

Helix maritima, *Drap.*—The Hoe and the heights at Whitsand Bay.

Helix caperata, *Mont.*—On dry banks, and occasionally beneath stones: common.

Zonites rotundatus, *Gray.*—Various habitats; most frequent beneath stones and wood: very common.

Zonites umbilicatus, *Gray.*—Under the top stones of walls on the heights at Oreston, Catdown, and Bovasand: abundant.

Zonites alliarius, *Gray.*—In moist situations, under stones, moss, and decaying leaves: I notice the smell is more powerful from those obtained in very damp habitats.

Zonites cellarius, *Gray.*—At the base of a shady hedge bank near Ford, and occasionally under stones.

Zonites purus, *Gray.*—In Manodon Wood and other localities, on decaying wood, among leaves, and on moist mossy banks: not common.

Zonites nitidulus, *Gray.*—Common in hedge banks and under stones.

Zonites crystallinus, *Gray.*—Among damp moss and leaves: not common.

Succinea Pfeifferi, *Rossm.*—On the edge of a stream in Magazine Lane.

Bulimus obscurus, *Gray.*—Common in hedge banks, among dried leaves, in the chinks of walls, and in the hollow trunks of trees: of frequent occurrence.

Bulimus acutus, *Brug.*—Very abundant on the embankments of the Citadel and the heights in the locality of Whitsand Bay.

Zua lubrica, *Leach.*—Of frequent occurrence beneath stones and among leaves.

Pupa umbilicata, *Drap.*—Very common in the chinks of old walls and beneath the dry moss on the tops of walls; I have also met with it among dry leaves, and in the dry husk or shell of the beech-nut when scattered on the ground.

Pupa Anglica, *Gray.*—At the roots of the grass and herbage on the under slopes of the Hoe.

Pupa marginata, *Drap.*—At the roots of grass on the higher slopes of the Hoe: not uncommon.

Balæa perversa, *Flem.*—Under the bark of trees in Mr. Cornish's grounds, under the top stones of walls, in company with Zonites umbilicatus, in the

localities before named, and I found this morning, (April 2nd., 1853,) two specimens at the roots of decaying herbage on the rocks of the Hoe.

Clausilia nigricans, *Linn.*—Very common: various habitats in various localities; I find it more frequently at the basement of walls.

Carychium minimum, *Leach.*—Rare: one specimen on a piece of decayed wood in Manodon Wood.

Acme fusca, *Gray.*—One dead specimen found in moss.

Limneus peregor, *Drap.*—In ditches and stagnant pools: very common.

Limneus palustris, *Drap.*—Not common: in stagnant water near Millbrook.

Limneus truncatulus, *Linn.*—Very common in ditches, frequently in company with L. peregor.

Ancylus fluviatilis, *Muller.*—In streams and on the rocky beds of rivers.

Physa fontinalis, *Drap.*—In a stream of water near Radford.

Planorbis lævis, *Gray.*—In a stream or drain in the grounds of Mr. Cornish.

Planorbis vortex, *Muller.*—In a ditch near the embankment.

Cyclas cornea, *Lam.*—In a pond near the new road.

Cyclas lacustris, *Turton.*—In company with the above.

Pisidium pusillum, *Gray.*—In a small pond near Weston Hills, one specimen.

Alasmodon margaritiferus, *Gray.*—Specimens from the Plym.

April 4th. 1853.

MARINE ANIMALS.

MOLLUSCA.—Part III.

BY O. S. ROUND, ESQ.

(Continued from page 92.)

I promised in my last paper to proceed at once to consider the interior structure of the "Conchifera," which may be said to be a recent addition to the Molluscous animals, but I find so much of interesting matter still connected with the shells, that my readers must pardon me if I keep them on the *outside* a little longer. It will be remembered that I spoke of the structure of all this tribe, and especially the "Pinna" or common Oyster, as cellular, or not solid, but composed of a series of cells or vacant spaces, which in common parlance would be called "tubes," (see Fig. 5.) For so thin a thing as a shell this may at first seem startling, but when we are a little acquainted with microscopic proportions our wonder will cease, that there should be such things, and begin, when we know that they exist. Now, "*Exceptio probat regulum,*" and so although, as a general rule, these shells are cellular and tuberous, it is only the *perfect* layers that are so,

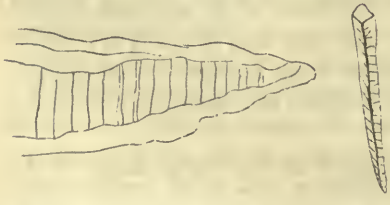


Fig. 5.—Section of the Pinna Shell, shewing the direction of the Cellular Tubes.

for we find in many, spaces between the layers, sometimes vacant, and sometimes with calcareous matter, which on minute examination proves to be either simple calx, or, in many instances, mingled with minute shells, (chiefly univalves,) sponges, and other minute marine productions. In some of the species, such as the *Spondylus*, the spaces between the lamina are very great, and this is conjectured to be a provision to avoid weight, as the shell is large, and nearly three inches in thickness, whilst that of a gigantic Clam, the heaviest known shell, is scarcely one inch, but then the latter is nearly solid, and it is probable, as indeed is partly known, that the animals which are inhabitants of these strong rocks of defence are not very discursive in their habits.

In some of these there is an apparatus for anchoring the shell to rocks or other substances, (see Fig. 6,) and so hard and firm is this adhesive

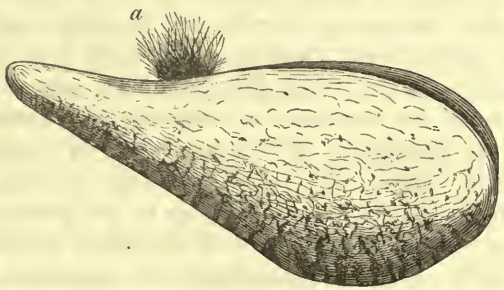


Fig. 6.—Spondylus; *a*, the adhesive process.

power, that, in many instances, the stroke of a hatchet only is sufficient to detach them. The material by which they adhere is a species of silky substance which extends from the foot; and this substance is woven into gloves from a kind of *Spondylus* found at Malta. These are bivalves, and similar in shape to a pear, only more straight and tapering, and the exterior of the shell is covered with open cells, which have unequal edges, and are the abode of several kinds of minute creatures, the foot protruding from one side at the narrow end of the shell. The common Oyster, when in a state of nature, has the convex shell undermost, and that portion which forms the hinge is of precisely the same structure as the shell itself. We all know very well the beautiful hues which are observable in some shells: now this quality is by no means confined to the Oyster, for a species of Mussel and Cockle found in the China seas present the most delicate and beautiful hues. In my former paper I described how this was produced, and that it was, green only, resident in a membrane, which being of the lightest possible hue in itself, by lying in folds produced the brilliant hues we see, being attended upon by its complimentary colour, crimson, (see Fig. 7.) This structure has been compared by Sir David Brewster to the appearance of planed wood,

but this applies only to the nacre, or mother of pearl, for the same appearance is not perceived in the subnaccous formation, which is common in most of these shells, and is in fact only a modification of the perfect structure. From the most beautiful shells the most valuable pearls are extracted, of the structure of which I shall speak in another place. In some of the Cockles, and to a certain extent in all, the hinge presents a series of teeth, which fit into one another in the interstices between each with beautiful accuracy, and in the *Mytilus Trigonia* the cellular formation is simply spherical, and not hexagonal, as in the Pinna tribe. In some species a partial absorbence of the cells is observable, and this, I believe, takes place to a certain extent in all.

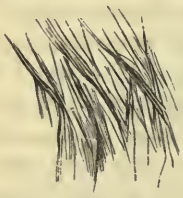


Fig. 7.—The mode in which the membrane is folded to give the colour to the mother of pearl.

The parasitical habits of Marine Animals are by no means confined to the Barnacles and the like species, for in the Conchifera we find some very curious and not unpicturesque examples. Thus there is a species of Pinna, known as the "Tree Oyster," which fixes itself upon some Gorgonia or other Vesiculosus, and has the appearance of a branching plant with shell-like leaves or flowers at the extremities of the branches. On examining these they appear transversely ridged, and exhibit the true structure of the Pinna tribe, only that, for the purpose of adhering to the plant upon which they fix, they have a series of clasping ends to the ridges not unlike claws, and some of the smaller ones have exceedingly the appearance of caterpillars; they are, when full grown, of a pear-like shape, and have a depression within the upper edge. One very remarkable circumstance connected with their growth is, that they retain exactly the same size where they adhere, and no lamina are added on the under surface, but all on the upper, so that the plant or sea-weed upon which they grow is not in the least injured by any pressure. Animals of all kinds make their habitation on the surface of the shells of Conchiferous animals, and interesting instances have occurred in which, as though for concealment, shells of a smooth surface attached themselves to those which were serrated or ridged, and took the same form. Barnacles, Sea-worms, and hundreds of minute creatures not only reside upon, but bore holes into these shells, and Corallines and Sponges adhere to them; so that it is not only in civilized life, or the higher order of beings, that the lower are dependent on the higher.

(To be continued.)

Miscellaneous Notices.

The Otter, (Lutra vulgaris.)—Three young Otters were shot last week near the pleasant village of Ansty, about three miles from this place, two of which are now in my possession.—William Bond, Frog Island, Leicester, February 24th., 1853.

The anecdote related by Mr. Martin Curtler, of Bevere, Worcestershire, in a recent number of "The Naturalist," of a Hare taking the water, reminds me of a similar occurrence many years ago in the case of a Rabbit. It was in Ireland. Standing under a steep cliff, to the base of which the tide nearly came up at high water, a Rabbit, seemingly disturbed by some persons walking at the top of the cliff, dashed down it; and whether from choice, or impelled by the necessity of its downward impetus, I know not, entered the sea and swam out a little way, when it was captured by the servant who was with us—one of the best swimmers, by the way, I ever knew, and my successful instructor in that art, in proficiency in which I have ever since excelled. His method was a very simple one—he took me out into deep water, out of my depth, and then let me go—"sink or swim"—keeping near for fear of accidents. I struck out at once, and was a swimmer ever after. Poor fellow—Geoffrey Connell was his name—he is believed to have been afterwards one of the crew who were murdered in cold blood in the most extraordinary manner by the captain of a merchant ship, who turned out to be insane, and who has since been in an asylum. They suffered themselves to be tied down by him one by one, as if their own senses had taken leave of them, and he then deliberately cut their throats. Another reminiscence of poor Geoffrey.—He had been out visiting one night at a neighbouring gentleman's house, and coming home rather late found the gate locked, and tried to get round the end of the wall which extended to the cliff, but, missing his footing, fell down on the beach and broke his leg, and there he lay, I believe, all night, till a boat coming by in the morning, he hailed her, and was brought home by the crew on a shutter.—F. O. Morris, Nafferton Vicarage, Driffield, May 16th., 1853.

The Sky-lark, (Alauda arvensis.)—Whilst at breakfast this morning a bird flew into the room, and as a Robin is in the habit of coming about and into the window, I supposed that it was him; but on going up to it, it being too frightened to move, I caught it, and found it to be a fine Sky-lark, whether pursued by a Hawk I could not ascertain. This being an unusual occurrence, I send you an account of it.—Fred. W. S. Webber, Merther, Truro, January 16th., 1853.

Dates of the departure of the Hirundinidæ from the neighbourhood of Lewes, in Sussex, 1852.

Swift, (Cypselus apus.)—Last seen August 20th.; wind, S. S. E. Fine.

Sand Martin, (Hirundo riparia.)—October 18th., two were seen skimming over the Pells; wind, N. E. Very fine and clear.

Swallow, (Hirundo rustica.)—October 27th., near Offham; wind, S. W. Fair but cloudy.

Martin, (Hirundo urbica.)—November 6th., four seen hawking under the eastern declivity of the South Downs, between Lewes and Offham; wind, S. W. Cloudy.

The autumnal congregating of these amusing birds first observed on the 20th. of August.—W. C. Unwin, St. Anns, Lewes, December 10th., 1852.

The Sparrow, (Passer domesticus.)—As some of the correspondents of "The Naturalist" seem to consider it rather an uncommon occurrence for House Sparrows to build in trees, I may perhaps be allowed to state that such is by no means the case. It is certainly true that these birds generally prefer holes and crevices wherein to rear their young, but not uniformly even in situations abounding with their favourite breeding holes. I have seen considerable numbers of nests in the trees in the gardens of Finsbury Circus and Finsbury Square in London, and I think there is no doubt that these situations could not have been resorted to for lack of suitable holes which there abound. In Finsbury Circus especially, the carved capitals of the pillars of the London Institution, and of the Roman Catholic Chapel, afford a commodious asylum for immense numbers of these little cockneys. I have also taken many nests when a boy from the fir trees which surrounded a farm-house, the extensive outbuildings to which being entirely

covered with thatch, would have afforded ample nursery accommodation to the rustic Sparrows, had they preferred it. I think fir trees of various kinds are those most frequently chosen, probably on account of the dark dense nature of the foliage.—E. K. B., February 2nd., 1853.

Unusual number of Thrushes near Gosport.—Mr. Barron, Curator of Haslar Museum, informs me that "after the fall of snow in the early part of last month, the cold at the time being rather severe, a most unusual number of Thrushes, chiefly *Turdus musicus*, were to be seen in pasture lands, frequently assembled in considerable parties about moss-grown patches, where they appeared to be searching for the larvæ of some coleopterous insect. I am confirmed in this view by an examination of the gizzards of several individuals, which I found principally filled with such food." During the present month I have myself seen large flocks of Thrushes on ploughed land similarly occupied.—John Rose, M. D., R. N., Haslar Hospital, Gosport, March, 1853.

Great Northern Diver on the coast of Hampshire.—Several strange birds have made their appearance here during the late cold weather. To-day I saw the Great Northern Diver, (*Colymbus glacialis*,) close to the shore near Haslar barracks. I came upon it suddenly, and was close enough to be enabled to identify it. It was very shy, however, and kept constantly diving to elude my observation. It was a young bird; and Mr. Barron, Curator of Haslar Museum, informs me he has not unfrequently met with it in this quarter during the winter months. Here old birds are extremely rare, and difficult to obtain. It is common on the coast of Irelaud during the winter, as recorded by Professor Fleming and others. It visits Spitzbergen and Greenland during the summer; and arctic travellers say it breeds as far north as the latitude of 70 degrees. It is pretty frequent along the Banffshire coast; and, when lately in the north of Scotland, I saw a beautifully-stuffed specimen of an old bird in the possession of my friend, James Milne, Esq., Portsoy, N. B.—Idem.

The Woodcock, (Scolopax rusticola.)—A gentleman, whilst shooting a short time ago near Newnham, in Gloucestershire, flushed a Woodcock, which settled in an oak tree, out of which he afterwards shot it. Thinking the occurrence an uncommon one, I send an account of it for insertion in "The Naturalist."—Hubert Beadles, Broadway, Worcestershire, March 16th., 1853.

Acmæa testudinalis, F. and H.—On seeing notices of this *Acmæa*, from my friends J. W., of Aberdeen, on page 136, vol. i., and A. K., of Montrose, on page 253, vol. ii. of "The Naturalist," and from what Mr. Wilson stated to me about it, I am induced to give you this notice, that while collecting the Mollusca of Aberdeenshire, with the late Dr. Macgillivray, I found this shell for the first time in the winter of 1847-48. It has been much sought for since that time, and I may state that I have found it along the coast with the *Acmæa virginea*, and I believe J. Wilson has done the same, and the fact that Mr. Kerr has found it at St. Cyrus, and Ferrydest, two opposite points on the Forfarshire coast, makes me believe that it will be found along all the east coast of Scotland; and in the same pools among the tufts of *Corallina officinalis:* by raising them up with a knife one will find the *Modiola discrepans*, and *discors*. All these with us are not what one would call rare, though not common.—James Taylor, Pitmixton, February 10th., 1853.

It does not occur with *A. virginea* on the Yorkshire coast.—B. R. M.

Vanessa Antiopa *near Whitby.*—Two specimens of this rare butterfly were captured on the Whitby Sands, this season, by two visitors from York.—John Braim, Sleight's Bridge, Whitby, December 16th., 1852.

One was the Rev. G. Rudston Read, of Sutton-on-Derwent.—B. R. M.

Fossil found on Bagshot Heath.—Since making the drawing and writing the notice on this Fossil, I have had a section made at right angles to the rings, which extend in light marks entirely through its substance, which abounds in *spicula* of sponges; but as this may favour the suggestion either of *cast* or an organic Marine Fossil *remanet*, into which minute sponges might have floated previous to petrifaction, the subject remains as much in doubt as ever.—O. S. Round, Lincolns-Inn-Fields, January 10th., 1853.

Hampshire Climate; Early Flowering of Plants.--The weather during the last six weeks has been unusually mild, though more rain has fallen here during December and the beginning of January, than for the last forty years during a similar period. I had a walk in the country to-day, and was gratified by observing several specimens of the following plants in flower near Gosport:—*Primula vulgaris*, *Ranunculus ficaria*, *Ranunculus acris*, and *Stellaria holostea*.—J. Rose, M. D., R. N., Royal Hospital at Haslar, January 18th., 1852.

Wood Anemone, (Anemone nemorosa.)--I have not unfrequently found the flowers of this plant more or less tinged with purple, especially when in bud. In its common state it is among our prettiest woodland flowers; but when thus tinted, its beauty is much enhanced. Yet lovelier is it, as I have found it in great abundance, in a rocky wood known as "Mount Crol," near Helston, Cornwall. Here many of the blossoms are tinged with rose purple, but the majority are of a delicate azure blue, somewhat resembling the tint of *A. Appennina*, but lighter. A more lovely bouquet formed of one sort of wild flowers, can scarcely be imagined. —C. A. Johns, Callipers Hall, Herts.

The Retrospect.

Do the Hawk tribe drink? The Kestrel, (Falco tinnunculus.)—In "The Naturalist," vol. ii., page 221, Mr. H. S. Daniell answers this question in the negative, and gives various instances of Hawks kept by him in confinement which never drank. Now, whatever may have been the case with Mr. Daniell's captive Hawks, it is quite certain that, in a state of nature, these birds do drink, in proof of which I will quote from a letter lately received from a friend of mine, an excellent *practical* ornithologist, who resides on the wildest part of the Pembrokeshire coast, and whose opportunities for observing the habits of birds are such as few are privileged to enjoy. He states, "I was watching the movements of a Kestrel Hawk the other day, as he was endeavouring to avoid the attacks of some Lapwings, when suddenly he went to the ground, as I expected, to take a Mouse. I looked at him through my glass (a good Dolland) and saw the bird as distinctly as if it had been within a yard of me. He deliberately walked a few feet to a small stream of water, and there drank copiously, and exactly as a common Fowl would drink." Mr. Daniell states that the Hawks which he kept never saw water; now it is very possible that had they been supplied with it they would have drank, and been glad to do so, and it is also possible that, in a captive and unnatural state, Hawks may not require water, at all events Mr. Daniell's observations prove they can live without it, but it is very certain that, in a state of nature, they drink other beverage than "the hot blood of the slain." —E. K. B, April 16th., 1853.

The above fact is a very interesting one, and clearly proves the point as to the Kestrel; but this being a species, the food of which consists a good deal of insects and very small animals, it may not by them be supplied with sufficient liquid, and may resort to water to supply the deficiency; whereas those species which prey on the larger birds and animals may find the blood in them to afford an adequate supply of fluid, and thus require no direct supply of water. We merely throw out this hint as a possible solution of the apparently opposite statements of our two correspondents.—B. R. M.

I regret that I should have fallen into an error with respect to the Jer-Falcon mentioned at page 60 of the current volume; the bird turns out to be a very large specimen of the Peregrine-Falcon, (*Falco peregrinus.*)—W. Martin, Stockton-on-Tees, April 11th., 1853.

Orthagoriscus Mola.—It is necessary again to correct Mr. Taylor, and also to add a few particulars which he omits at page 88 of the current volume of "The Naturalist." On calling at our house, as he said that he had previously received *no* account of the fish, at his request I gave him a description of it. *This*, except the error previously corrected, appeared *verbatim*, without acknowledgment, as his own in "The Naturalist," vol. ii., page 280; *this*, he now says, he got from "a fisherman," and also discovers that my account agreed *nearly* with the one he sent. To explain the cause of the mistake in the newspapers is unnecessary, (and I may mention that Mr. Taylor's statements with regard to the Rev. Mr. Longmuir are quite

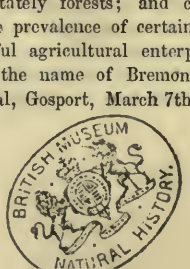
gratuitous,) as Mr. T. is alone responsible for the error he commits, although he now finds it convenient to say that it appeared in "The Naturalist" on "the authority of the Rev. Mr. L.;" any ordinary reader, however, would have thought that the name had been given on the authority of Mr. James Taylor himself. Mr. T. must have forgotten that he agreed with me in thinking that I ought to send an account to "The Naturalist," informing me also that *he* did not intend doing so, the particulars being merely for his own private use. He is also quite mistaken in saying that I told him "that it was *O. truncatus*," as I did not once allude to the specific name. Since much of Mr. Taylor's communication wanders far from the point, and not a little of it will be seen to consist of mere surmises, it is not necessary to say more, and I would only hint that, in any future communication, he should mention on whose authority he makes the statements.—JOHN LONGMUIR, Jun., Aberdeen, April 15th., 1853.

We think that no good end can be obtained by further prolonging this controversy, and both parties having now had an opportunity of making their own explanations, we can insert no more on the same subject.—B. R. M.

The Querist.

A correspondent asks the comparative size of the eggs of the Goldfinch, and the Chaffinch. The latter is the largest, and there is no resemblance whatever between them. The Goldfinch's egg has a light ground speckled at the large end with brown, and darkish specks and streaks precisely as the Linnet's egg is; while the Chaffinch's egg is a greenish ground with a red blush all over it, and spotted with dark rusty-coloured blotches and lines. The egg of the Sedge Warbler is a yellow brown kind of a ground with darker specks. The Reed Warbler's egg is precisely like the Blackcap's, but rather larger. I once had an abundance of the eggs of both varieties, but have now none of the Sedge Warbler's left. The Whinchat's egg is a pale blue, precisely like the Hedge Warbler's, the Redstart's, and the Wheatear's; between which there is such a resemblance, that if mixed they could scarcely be identified again, for this reason it is useless to think of buying them from dealers; for, although most bird preservers sell eggs, it is impossible for any one to decide with certainty, unless they actually collect their own eggs. The Whinchat and Stonechat both breed in profusion on Keston Common, Kent, which is only a short distance from London, and here an abundance may be procured about the first week in June, and of many other birds in addition. I should say the nest and eggs discovered by your correspondent, were the property of a Blackbird, and the unusual size may be accounted for by the hen being in the prime of life, when the eggs are larger than when laid by a young bird. The Ring Ouzel's eggs are not usually larger than those of the Blackbird, and those I have are almost of a uniform brown, not quite so speckled as those of the latter; however, if the nest was built on the ground, it might have been the Ring Ouzel's, though I have taken scores of Blackbird's nests built in this situation on the top of a bank.—C. W. BROWN.

Common Reed, (Arundo Phragmites,) (Arundo arenaria,) *Sand drift*.—In answer to the inquiry in "The Naturalist," as to the means of propagating and cultivating the Common Reed round a pond with a gravelly bottom, I would suggest the obvious, and I should think not very difficult plan of transplanting several of the grasses, say about the beginning of April, leaving a quantity of the subsoil attached to the roots. By placing a few of these round the pond, I have no doubt they would gradually extend, and form an enclosure without further trouble. At all events the experiment is worth a trial; and if it does not succeed, the transplanting should be effected earlier next season, and a quantity of mud might be mixed with the gravel around the roots. In connexion with this subject it is worthy of note, although I presume the fact is generally well known, that the *Arundo arenaria* has been planted in the outer Hebrides for curing sand drift, and with considerable success. In other parts of the world *Carex arenaria*, *Calamagrostis arenaria*, and *Plantago arenaria*, have been employed for the same purpose. "By the cultivation of these plants," says the Rev. Thomas Milner, "large districts have been reclaimed from utter barrenness, and clothed with stately forests; and countries subject to a periodical invasion of sand, blown over them by the prevalence of certain winds, have been rescued from that calamity, one of the most useful agricultural enterprises of modern times. The plan was first adopted by an engineer, of the name of Bremontier, on the coast of Gascony."—JOHN ROSE, M. D., R. N., Haslar Hospital, Gosport, March 7th., 1853.



LOCAL JOTTINGS.—No. 8.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

The Otter, (Lutra vulgaris.)—This mischievous little animal has I believe seldom, if ever, before been known to be in this neighbourhood; but the fish having of late rapidly disappeared from that part of the River Froome, near Loud's Mill, Fordington, it was suspected that Otters were located near. All doubt is now at an end; for in November last, on a morning after a hard frost, a gentleman, a friend of mine, was called out by his servant, and with him distinctly traced the run of an Otter. At the edge of the river they saw his footsteps clearly marked, and the impression of his body, showing even the tail distinctly marked, where he had lain and eaten a fish he had taken. The scales and a part of the gills of the trout had been left there. It is supposed that a considerable number are between this town and Woodsford.

The Swift, (Cypselus apus.)—As I always think that the greater corroboration of any particular fact connected with Natural History the better, I state the following in my Jottings:—Mr. Wilson, I observe by the January number of "The Naturalist," vol. iii., page 21, speaks to having seen some of these birds so late as the 26th. of August last. Now I find a note in my diary made of my observation of two or three of these birds on the 24th. of August last. Are not the departures of many birds of late years very much delayed in comparison with former years? Is not the gradually increasing greater mildness of the seasons of late the cause of this? It is surely worth inquiry.

The Swallow-tail Butterfly, (Papilio Machaon.)—This interesting and elegant butterfly is, I believe, rarely met with in the west of England, and indeed I can find no mention of any others having been taken in Dorset than those referred to in the Rev. F. O. Morris's "History of British Butterflies." It is there stated that J. C. Dale, Esq. took twelve specimens at Glanville's Wootton in three days, about thirty years ago. Mr. Dale also informs me that once before that he took twenty-eight *P. Machaons* in one day in Hants. I therefore think it worthy of mention that in the month of July, just nine years since, I saw a large butterfly, which I could not make out, disporting itself on the Down, close to the two-mile stone, on the old Sherborne Road, in the parish of Charminster. I fortunately succeeded in taking it, and to my surprise and pleasure discovered it to be one of the above. It is very prettily marked, and I have it now, as may be imagined, carefully preserved in my cabinet.

The Primrose, (Primula vulgaris.)—Evidencing the progress of the seasons here, I gathered a large number of these early harbingers of spring, and also some of the Snowdrop, (*Galanthus nivalis*,) growing wild in a copse at Upcerne, in this county, on Monday, the 14th. instant; and on Sunday, the 20th. instant, found, for the first time this season, some of the modest Wild Violet, (*Viola odorata*,) on a bank at Froome, near this town.

Dorchester, March 28th., 1853.

BRITISH MUSEUM NATURAL HISTORY

LOCAL JOTTINGS.—No. 2.
MONTGOMERY—NORTH WALES.

BY JOHN MATTHEW JONES, ESQ., M. Z. S., OF THE MIDDLE TEMPLE.

(Continued from Vol. II., page 211.*)*

Weasel, (Mustela vulgaris.)—I shot a very singularly-marked specimen the other day in the Butcher's Nursery. It was all white, excepting a large blotch of its natural colour on the head, and a few spots on the back; the tip of the tail is black.

Snipe, (Scolopax gallinago.)—I have been out the last day or two in Stalloe meadows on the look out for Ducks and Snipes. The Snipe is at present very numerous for this part of the country, for I counted on the fourth of this month about twenty in my ramble. These meadows are covered here and there with large tussocks of coarse grass, and when the least rain comes on, are flooded in most parts. It is here the Snipes love to feed and shelter themselves, and the muddy parts are covered with their droppings; but it is only in wet weather that they are to be found in these low meadows, for when the frost comes on they take to the hills, and are found generally in pairs. We have a great many springs hereabouts, and wherever one of these occurs, a soft pulpy patch of green grass surrounds it, which never freezes, and it is in such places the Snipes locate themselves during frosty weather. I have visited the haunts of this bird in England, Scotland, and Ireland. In England I have shot it on Parr Moss, a large bog situate between Liverpool and Manchester; in Scotland, in Western Argyleshire; and at Clew Bay, County Mayo, in Ireland.

Wild Duck, (Anas boschas.)—There is a stream called "The Kemlet," about four yards wide, and very deep, which runs through the before-mentioned meadows, and when a frost takes place, divers pairs of Ducks come from Symore Park to feed, and by creeping stealthily along you may now and then flush a couple of these birds in some quiet bend of the stream, coming upon them suddenly, presenting a glorious shot. These Ducks in the autumn, as soon as the corn gets ripe, do considerable damage to the crops of wheat by alighting in it, and pulling down the stalks to get at the ear. I have heard the farmers complain sadly; and indeed I think they have good reason, for it is no joke to have fifty or sixty of these birds in the middle of a choice field of wheat, pulling it down and eating the corn on all sides. They generally arrive in the fields at dusk, and continue there till daybreak, when they fly back to their decoys.

Partridge, (Perdix cinerea.)—Strange to say, we have, although a bad breeding time, had a very fine show of birds this last season; and when our English friends have been complaining loudly, we have made as good a bag as usual. I can only account for this in one way.—In Wales here our fields nearly always slope very much, and although a season may be unusually wet, the water immediately

runs off into the valleys; the birds are therefore very little affected by a continuance of rainy weather, and so generally thrive at all times. Our coveys are at times very large, and it is by no means rare to meet with several during a day's shooting of eighteen birds each. I have known of a covey of twenty-four on the 1st. of September, and that in a field close to this little town. I should like to see a Norfolk shot after one good day's work amidst our Welsh hills, where a covey once flushed take over a high hill, and require a good hour's work to find them again. It certainly is most terrible work on a broiling September day to fag up a hill, only slightly out of the perpendicular—a trying affair for a fat alderman!

Woodcock, (Scolopax rusticola.)—We have had numbers this season more than I ever recollect. Captain P.——, a friend of mine, has bagged twenty-five, and other gentlemen in proportion. I was out the other day, and while beating the bottom of one of our covers at Ffronffraith, the man said, "I saw a cock here in brier bush a day or two ago;" he went up, and upon looking down into the this briers called out, "and here he is now with his head stuck into a lot of leaves." He was told to beat the bush, and up got the cock, and on being brought to bag a finer bird could scarce be seen. This country is well adapted for the Woodcock, being interspersed with wooded dells and dingles, with dense underwood, and there is hardly a hill side but what is clothed with wood.

Thrush, (Turdus musicus.) Feb. 6th.—This bird was singing loudly this evening. Thermometer 42 degrees in-doors.

Montgomery, North Wales, February, 1853.

OCCURRENCE OF RARE LAND BIRDS IN ABERDEENSHIRE.

BY MR. JAMES TAYLOR.

Aquila chrysaëtos, (Golden Eagle,) is still breeding as near us as the forest of Birse, which is about thirty-eight miles from Aberdeen. I saw an egg taken from their nest in 1851, now in the possession of Mr. Evan.

Haliæëtus albicilla, (White-tailed Sea Eagle.)—One of them, in his first winter's plumage, struck against the Girdel Ness Lighthouse during the night, a few years ago, measuring fourteen feet from tip to tip of the wings.

Pernis apivorus, (Brown Bee-Hawk,) shot at Reeden in the end of the summer of 1847, and now in the possession of Mr. Charles Black, gardener there at that time. When shot he was covered with *Bombus muscorum*.

Merops apiaster, (Yellow-throated Bee-eater,) (See vol. ii. page 204,) was shot at Kinmundy, as recorded by Thomas Ferguson, Esq., Glasgow; and another was shot in Forfarshire, in 1851, now in the Montrose Museum.

Epupa Epops, (European Hoopoe.)—A specimen of the Hoopoe was shot,

as reported in vol. ii., page 238, of "The Naturalist," in the spring of 1852, at Crimmonmogate.

Lanius excubitor, (Great Cinereous Shrike,) shot in the autumn, 1846, on the Banks of the Dee by myself.

Lanius borealis, (Great North-American Shrike,) reported in vol. ii., page 239, is in the collection of the late Dr. Macgillivray, to whom Mr. T. Mc'Kenzie presented it; who, some years ago, pointed out the difference to me between it and the *Lanius excubitor*.

Muscicapa atricapilla? (Pied Flycatcher,) might be taken for *Sylvia atricapilla*, which breeds with us; while the *M. atricapilla* was not known to have been found in Scotland till 1840; for Dr. Macgillivray says, in his "British Birds," vol. iii. page 528, "It may seem somewhat strange that this species should not have been met with in any part of Scotland." And as far as I can remember it was the *S. atricapilla*.

Picus viridis, (Green Woodpecker,) was seen in 1847 at Nelfield; and in 1850, one was procured at Arthur's Seat.

Linaria minor, (Redpole Linnet,) is sometimes found with us during the winter season. I have seen one or two that were shot.

Sturnus vulgaris, (Starling.)—Although common in the outer Hebrides, and other parts of Scotland, it is rather scarce with us; I only remember seeing a pair, 1845, which I shot.

Bombycilla garrula, (Bohemian Waxwing,) occurs with us almost every winter. In 1850 as many as ten or fourteen were got.

NESTING.

Falco peregrinus, (Peregrine Falcon,) still continues to breed with us on an inaccessible rock, and has done so, I am told, for this hundred years past at the cove.

Turdus pilaris, (Fieldfare.)—Mr. C. Black showed me the nest of a pair that bred at Reeden in 1847.

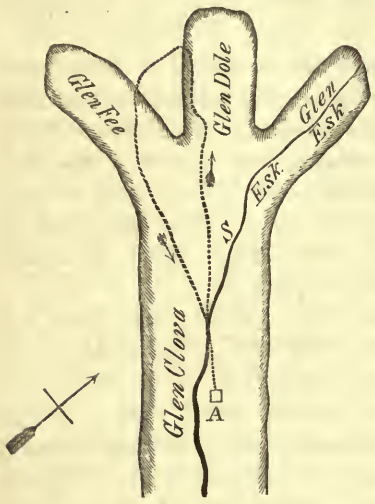
Pitmixton, March 3rd., 1853.

A DAY AT CLOVA.

BY CUTHBERT COLLINGWOOD, ESQ., M. A.

Since it does not fall to the lot of every one of the readers of "The Naturalist" to visit and ransack the floral treasures of this romantic district, so well known to many botanists, the following reminiscences of a day's ramble there may perhaps be interesting to those who know of it only by

report; and to such as *have* visited it, they may call up some pleasurable recollections of a similar excursion:—



The Clova glens are offsets of the Grampians, about twenty miles north-west of Forfar. The district to which I am alluding, consists of one broad and wild, but beautiful valley, called Glen Clova, terminating in the Grampian chain, in three smaller valleys; the most northerly being called Glen Esk; that to the south, Glen Fee; and the middle, Glen Dole. The bottom of these valleys is considerably elevated above the sea level, and the mountains which bound them rise from about fifteen hundred to two thousand feet above this elevated base. The South Esk river flows from Glen Esk, and passing out into the main valley, glides placidly along, widening as it advances, forming a capital trout stream, in whose sedgy margin may be found the *Carex aquatilis* and the Grainless Water-Dock, (*Rumex aquaticus;*) while the handsome heads of the Melancholy Thistle, (*Carduus heterophyllus,*) are conspicuous above all their sisters of the stream. The nearest habitation to these glens is a house at a spot called Kirktown Clova, containing two beds for travellers; but as our party was large, we were fain to sleep in a spacious barn-like apartment, used occasionally by the assembled clans as a dancing-room. On the floor of this barn, for it was certainly more like a barn than a ball-room, a few trusses of clean straw had been scattered, and, our hardship being voluntary, we passed a not uncomfortable night. This house is marked A in the accompanying plan, and the dotted line refers to the route of our excursion.

It was a lovely morning in the latter part of July, when, after performing our toilet, *sub dio,* on the banks of the clear flowing Esk, and partaken of a hearty breakfast, we set out about seven o'clock in high spirits, exhilarated alike by the cool morning air, the quiet grandeur of the scene, and the anticipation of the botanical novelties that we expected to meet with. Fully equipped with vasculum, spud, and knapsack, we bent our course straight up the Clova valley towards the north-west, our path being for some time covered with the beautiful yellow flowers of the Mountain Saxifrage, (*Saxifraga aizoides;*) while the less conspicuous Alpine Bistort, (*Polygonum viviparum,*) proved very abundant upon a slight search. The outskirts of our party lighted upon a large patch of the cream-coloured *Gymnadenia albida,* and the delicate and handsome Wintergreens, (*Pyrola rotundifolia* and *P. media,*) held their tall and drooping flowers too high to escape our notice. How unfortunate it is, by

the way, that these singularly-beautiful flowers do not retain their colours in the Herbarium. That remarkable grass, the *Festuca ovina, var. B. vivipara,* was very abundant; and the aromatic *Meum athamanticum* not unfrequent, but generally in a state of fructification.

When a considerable distance up the glen we arrived at a muddy spot, which possessed peculiar attractions; for our experienced leader knew that there grew the curious little Bog Orchis, (*Malaxis paludosa.*) Twenty pair of eyes were immediately peering over the mossy swamp, and of course the little Epiphyte was soon detected. In another marshy spot, a little more elevated, the Scottish Asphodel, (*Tofieldia palustris,*) was added to our boxes; and the Mountain Bramble, or Cloudberry, (*Rubus chamæmorus,*) offered its reddish yellow fruit in profusion to those who cared to pluck it.

By this time we had entered upon the middle of the three glens into which the main valley divides, namely, Glen Dole, and we immediately commenced ascending its lofty side on our left. And here, as we ascended, a new series of plants repaid our somewhat laborious path. Passing through large quantities of Mountain Cudweed, (*Antennaria dioica,*) we soon discovered that the most characteristic plant of this mountain side was the Moss Campion, (*Silene acaulis,*) which well deserves its name, clothing the rocks in abundance, and having just the appearance of moss, until on a nearer inspection, we descry the numerous and elegant little pink flowers which spring from among its dense leaves. The pretty silken leaves of the Alpine Ladies' Mantle, (*Alchemilla alpina,*) and the sapid leaves of the Mountain Sorrel, (*Oxyria reniformis,*) were, as usual in such situations, abundant; and two of the most elegant of British plants, namely, *Trientalis Europœa* and *Parnassia palustris,* were not unfrequent; the latter plant being of course in a young and little advanced condition.

On a rock at a considerable elevation, we came suddenly upon the magnificent blue Alpine Sowthistle, (*Mulgedium alpinum,*) one of the most handsome of the mountain Flora; and this was the only individual we met with on that day. The poor plant quickly met the fate of Orpheus, for we were then, although not full of the god, yet for the time under the no less inspiriting influence of the goddess. In the rocky gullies down which flowed the mountain torrents, the Alpine Hawkweeds were frequently met with, more especially the var. *β. Halleri.* The remaining flowers of importance found on this mountain side were the Alpine Flea Bane, (*Erigeron alpinus,*) Alpine Meadow Rue, (*Thalictrum alpinum,*) and several of the *Lycopodia,* namely, Fir Club-moss, (*L. selago,*) Prickly do., (*L. selaginoides,*) and Marsh do., (*L. inundatum.*)

I should be occupying a great deal too much of the space of "The Naturalist," were I to attempt to describe the variety and grandeur of the scenery which met our eyes; at one time looking up to the mountain from the valley; at another scouring the glens from the mountain summit; but as the botanist must not always walk with his eyes on the ground, so I should

be wrong did I rove among these floral beauties without casting a look from time to time upon the surrounding mighty masses, which so calmly lay bathed in the glorious summer sun.

Having reached the summit, we proceeded across the mountain in the direction of Glen Fee, over a carpet of moss and lichen, the substratum of which consisted of two lichens of peculiar interest, namely, Iceland Moss, (*Cetraria Islandica,*) and Rein Deer Moss, (*Cladonia rangiferina;*) and here we were so fortunate as to meet with those two rare *Carices*, the handsome Black Carex, (*C. atrata,*) and the Alpine Loose-flowered Carex, (*C. rariflora.*)

On arriving at the brow of the mountain overlooking Glen Fee, we had to descend by a very precipitous path, which required not only the use of our feet, but of our hands also; but this position, while it restricted our attention, at the same time brought our eyes nearer to the ground, so that the little Mountain Cudweed, (*Gnaphalium supinum,*) did not escape us; and among the loose and powdery limestone, we often saw the Mountain Avens, (*Dryas octopetala,*) but its large white flowers had passed away, leaving the feathery style remarkably apparent; *Sibbaldia procumbens* had also passed its prime. The yellow cymes of the Rose Root, (*Sedum Rhodiola,*) were very conspicuous at a distance, as the tall plant sprung out of the almost bare parts of the rock. But the goal of our hopes is a rocky hillock in this valley, where almost side by side grow two of the greatest botanical rarieties of this country, namely, the Pale-flowered Mountain Milk-Veteh, (*Oxytropis campestris,*) and the fern known as *Woodsia Ilvensis*. Here then we concentrate our forces, and having climbed the rocky cliff, where Mr. Don first found the former of these plants, (and I believe no one has found it any where else in Britain,) we soon had the pleasure of seeing it there, and by anticipation in our Herbarium.

The day is now declining, and we have achieved the principal objects of our ramble. Already it is a considerable time since, perched, like Crows, on a projecting rock in Glen Dole, we devoured the contents of our knapsack with all the relish which the mountain air, and a clear mountain stream could impart on a hot summer's day; and we accordingly prepare to shoulder our trophies, and to make for our lodging at Kirktown Clova, which is now nine or ten miles distant. On our way we added the green flowering variety of the Bedstraw, (*Galium verum,*) and arrived *home* at about half-past seven, well tired and well pleased. Some of our party, who preferred the quiet indolence of the "gentle sport" to the more laborious amusement which we had undertaken, had provided for us abundance of trout, which with tea, milk, and other good things, which mountaineers appreciate, awaited us. Having bathed our wearied limbs in the refreshing waters of the Esk, we fell to, and afterwards slept soundly on our pallets of straw; having spent a day which will ever be prominent in our memory among botanical rambles—having enriched our Herbaria with a large number of rare plants, and stored up pleasant recollections which will not leave us till the latest periods of our lives.

Blackheath, March 24th., 1853.

BOTANICAL REMINISCENCES.

BY JOHN ROSE, ESQ., M. A., M. D., F. B. S., ASSISTANT SURGEON R. N.

THE Flora of Aberdeen is much richer, and more varied than one would suppose, judging from the bare and barren appearance of the surrounding district. "Many botanists," as Dr. Dickie remarks, "have supposed that a close relation exists between the plants of a country and the nature of its rocks; in other words, that certain plants are confined to granite, and others to sandstone formations, etc. In this district granite, gneiss and mica-slate seem to predominate over all the others; but the old red sandstone prevails to a considerable extent as at the old bridge of Don. Small formations of greenstone, serpentine, hornblende slate, and porphyritic felspar also occur." As far as our observation goes, few, if any, of the plants are confined exclusively to particular rocks; but more extended inquiries may lead us to change our views.

Nearly six hundred species of plants are found within a twenty miles circuit of Aberdeen. *Linnœa borealis* occurs in several stations. In a wood opposite Fintray House, my late lamented friend, Professor Maegillivray, found it with *three* and *four* flowers on a pedunele, and not always with *two* flowers, as denoted by its English name. *Chrysosplenium alternifolium*, a rare plant in the district, although pretty common in the neighbouring county of Banff, was first found on the banks of the Don by the same gentleman. *Chrysosplenium oppositifolium* is frequent here, as it is almost everywhere in the north of Scotland. *Utricularia intermedia* and *U. minor* we have also gathered in the vicinity. *Lithospermum maritimum*, the leaf of which is thick and fleshy, and of a pale green colour, with a taste resembling oysters, is found occasionally on the Aberdeenshire coast. *Hyoscyamus niger*, *Agrimonia eupatoria*, *Geranium sanguineum*, *Campanula glomerata*, and *Astragalus glacyophyllus* we have gathered near the old castle of Dunottar, so famous in Scotch History. In addition to the common *Ranunculi*, *R. auricomus* occurs occasionally on the banks of the Don. Perhaps my friend and class-fellow, Dr. Wm. Williamson, of Aberdeen, still remembers the trouble we had, and the risk we ran, in collecting *Ranunculus sceleratus*, and other marshy plants near King's College.

The White and Yellow Water-lily occur in several small lakes or *lochs* near Aberdeen.

"Mark where transparent waters glide,
Soft flowing o'er their tranquil bed;
There, cradled on the dimpling tide,
Nymphœa rests her lovely head.

But conscious of the earliest beam,
She rises from her humid nest,
And sees reflected in the stream
The virgin whiteness of her breast.

Till the bright-day star to the west
Declines, in ocean's surge to lave;
Then folded in her modest vest
She slumbers on the rocking wave."

Adoxa moschatellina likewise occurs in the district, but it is very local. I omitted to mention it in my paper on the Flora of Banff. It is found in considerable quantity under the shade of trees on the south side of the bridge of Alvah, a beautiful and romantic spot forming part of the wide domain of the Earl of Fife. Of Grasses may be mentioned *Catabrosa aquatica*, *Melica cœrulea*, *Poa aquatica*, *Triodia decumbens*, *Briza media*, *Bromus sterilis*, *arvensis*, and *secalinus*. Of Ferns, the only one worth mentioning is the *Osmunda regalis*, which occurs in one or two places, but is a rare plant in the north. Of *Lycopodiaceæ* may be mentioned *Lycopodium Selago*, *L. Selaginoides*, *L. alpinum*, and *L. annotinum*.

Nearly ten years ago the author of the preceding notes had the pleasure and privilege of attending the lectures and excursions of Dr. Macgillivray, late Professor of Natural History in Marischal College, Aberdeen. Well does he remember the pains taken by the amiable and talented Professor to inspire a love for the science. His lectures were remarkable for the elegance of their composition, clearness of arrangement, and for a peculiar freshness, which arrested the attention, while it, as it were, invested even common subjects with the charm of novelty. His great aim was to awaken and keep alive in the minds of his pupils, that enthusiasm in the pursuit of knowledge for which he was himself so distinguished. Above all, it was his custom, as opportunity offered, and in the most unostentatious manner, to direct our minds to the contemplation of the Author of Nature, as the Great First Cause of All, leading us to admire the power, wisdom, and goodness so conspicuous in all His works. Far from separating religion from science, he regarded the one as the handmaid of the other, and looked on the Book of Nature, when properly studied, as a sure testimony to the truth and excellency of the Book of Revelation. The devout feelings of his mind encouraged and supported him during his last illness, and, in the days of health, amid many a solitary ramble when engaged in the pursuit of science; while they rendered him most amiable and exemplary in all the relations of life.

I trust that this humble tribute of regard for the memory of a much respected friend may not be unacceptable to the readers of "The Naturalist," some of whom, doubtless, knew him well personally, or may at least in some measure know him from his published works.

Royal Hospital at Haslar, Gosport, January, 1853.

POOLE AS A LOCALITY FOR THE STUDY OF NATURAL HISTORY.

BY THE REV. FREDERIC FANE.

Allow me to point out to any of your readers who are interested in the subject, that few places would be better suited to a practical naturalist or collector than the neighbourhood of Poole, in Dorsetshire, or Christchurch, in

Hampshire. I wish my knowledge of Natural History enabled me to watch with a more practical eye the face of nature in this favoured part of the kingdom. The warmth of the climate in this county is favourable to the production of wild plants in an endless variety; nowhere do I see the Ferns so various or luxuriant, hedges so gay, or woods so carpeted with flowers. In a month's time the Primrose, Anemone, Orchis, Periwinkle, Wild Hyacinth, (a white variety is very common also,) and a thousand others will make every coppice a garden; the rare Fly Ophrys too I have seen growing in the chalky woods at Ranston, in this county. As a proof of the mildness of our Dorsetshire climate, I may mention that at Lower Lytchett, a few miles from hence, may be seen in the open air a hedge of Cammelias, more than ten feet high and twenty or thirty yards in length, of most luxuriant growth, and which is a perfect blaze of blossom, and far more healthy and vigorous than I have ever seen the plant in any greenhouse; near it also stands an Araucaria nearly thirty feet high. Vast heaths and moors extend over many thousand acres in these counties, continuing in an almost unbroken chain from Southampton to Dorchester, including the wild tract of the New Forest—a distance of fifty miles. These moors have an unenviable notoriety as a favourite haunt of all the species of reptiles which are found in Britain; botanists also report them as a favourite field of search; in the many clear streams also that intersect the country, almost every fish usual to English waters is to be found, from the lordly Salmon to the humble Minnow.

The immediate neighbourhood of the sea, the great bays and creeks of Poole harbour, and the vast extent of tidal mud-flat between its mouth and Calshot Castle in the Southampton Water, give us as great a variety of wild fowl in the winter months as could be found perhaps in any other part of the western seaboard. This season, from the mildness of the winter, we have been visited by few of the rarer species, and I have been able to make no additions to my collection, with the exception of a young bird of the Red-necked Grebe, (*Podiceps rubricollis,*) and a solitary Pintail, *(Anas acuta.)* With regard to the latter bird, I should think it must be more rare than Yarrell leads us to expect, as he describes it as not uncommon on the mud-flats before mentioned, whilst a friend of mine, who annually kills more wild fowl perhaps than any other amateur, tells me that he has never killed but one other on the same water. Since the beginning of February the Teal have been in far greater numbers than ever were previously known; on one occasion, in February, I assisted in bagging one hundred Duck and Teal, and on another occasion the same party bagged one hundred and seventy in one day. On the River Avon, above Christchurch, almost all the rarer species of wild fowl make their haunt, and in cold seasons great numbers of that noble bird, the Hooper, (*Cygnus ferus,*) are killed there. In the Earl of Malmesbury's collection at Heron Court, are preserved in one case the heads of four Hoopers, which, with a splendid male preserved in another case, make a very good study of the peculiarities of the Wild Swan, as distinguished from

the Domestic bird. That splendid bird the Shoveller, (*Anas clypeata,*) is not uncommon on the same river, and I fancy that a pair or two occasionally breed in the neighbourhood, as I have seen them upon it as late as the middle of April. This river, the Avon, contains also, with the exception of the Barbel and Chub, every English River Fish, including that very rare Eel the Snig. On the shallows in the hot summer time they may be seen in great numbers at all hours of the day, which is rarely the case with the Common Eel. Altogether, whether to a sportsman or a naturalist, no locality could be more favourable than the east of Dorset or the west of Hampshire.

Corfe Mullen, Wimborne, March 29th., 1853.

THE PROPAGATION OF HARDY TREES AND SHRUBS.

BY J. MC' INTOSH, ESQ.

In reply to the inquiries of the Rev. F. O. Morris, in Nos. 17 and 25 of "The Naturalist," respecting the various trees that will strike from *cuttings,* I beg to offer the following list of *Trees* and *Shrubs,* with their various modes of propagation, which I hope will prove satisfactory; at the same time I beg to apologize to that gentleman for not before replying to his request.

TRIBE I.—CLEMATIDEÆ.

The genera are two—*Clematis* and *Atragene,* which are thus distinguished—*Clematis,* petals, none; *Atragene,* petals, several.

Genus I.

Clematis, (*Clematis,*) Polyandria Polygynia.—The greater number of this genus ripen their seeds in England, and are easily propagated by them, or by layers the most common, and frequently by cuttings.

Genus II.

Atragene, (*Atragene,*) Polyandria Polygynia.—This genus is extremely interesting from the beauty of the blossoms. The culture and propagation the same as Clematis.

TRIBE II.—PÆONIACEÆ DEC.

The genera are two—*Pœonia and Xanthorhiza.*

Genus I.

Pæonia, (*Pœony,*) Polyandria Di-Pentagynia.—The species and varieties are all beautiful, and are propagated by seed, division of the roots, grafting, budding, layers, ringing, and by cuttings.

Genus II.

Xanthorhiza, (*Yellow Root,*) Polyandria Mono-Trigynia.—This genus is readily propagated by suckers, of which it throws up a great number. The plant, however, is seldom met with, except in botanical collections.

ORDER II.—WINTERACEÆ.

Evergreen shrubs or low trees, chiefly natives of warm climates, though our present subject is sufficiently hardy to stand the severity of our winters.

Illicium, (*Aniseed,*) Polyandria Polygynia.—The manner in which these plants are propagated is by forming stools of it in a cold-pit, and laying down the shoots, which require two years to root sufficiently to admit of their being separated from the parent plant. Also by cuttings under a glass.

ORDER III.—MAGNOLIACEÆ.

The species hardy in British gardens are included under the genera *Magnolia* and *Liriodendron*. The characters of which are as follow:—

Magnolia—Carpel dehiscent, that is, opening to admit the escape of the seed.

Liriodendron—Carpel indehiscent, that is, not opening to admit the escape of the seed.

Genus I.

Magnolia, (*Magnolia,*) Polyandria Polygynia.—This beautiful genus is propagated from seeds procured from abroad, by layers, and readily by cuttings.

Genus II.

Liriodendron, (*Tulip Tree.*)—This tree is seldom propagated otherwise than by seeds; they are, however, easily raised by layers, inarching, and by cuttings

ORDER IV.—ANONACEÆ.

The hardy species in British gardens are included in the genus *Asimina,* formery *Anonia,* and are natives of North America.

Genus I.

Asimina, (*Asimina,*) Polyandria Polygynia.—In our gardens this plant is generally raised from American seeds. It is a curious-growing deciduous shrub, or low tree.

ORDER V.—MENISPERMACEÆ.

The species in our gardens are included in the genera *Menispermum* and *Cocculus,* and are thus distinguished:—

Menispermum—Sepals and petals, quaternary; male flowers with fifteen to twenty stamens.

Cocculus—Sepals and petals ternary; male flowers with six stamens.

Genus I.

Menispermum, (*Moonseed,*) Dicœcia Dodecandria.—The species are all of the easiest culture in common soil, and are propagated by dividing the roots, or by cuttings, or layers in autumn.

Genus II.

Cocculus, *(Cocculus,)* Dicœcia Hexandria.—A twining deciduous shrub, propagated by dividing the roots, layers, and cuttings. The berries of many of the species of this genus are often made into a paste, and used in their native countries, (North America and Dahuria,) to intoxicate fish and birds, etc., in order to capture them; and it is said that brewers use them to give their ale and porter an intoxicating quality.

ORDER VI.—BERBERACEÆ.

Bushy shrubs, natives of the temperate climates of Europe, Asia, and North America. The genera containing the species hardy in our gardens are the following:—

Berberis—Petals with two glands on the inside of each; stamens, toothless; leaves, undivided.

Mahonia—Petals without glands; stamens, furnished with a tooth on each side; leaves, pinnate.

GENUS I.

Berberis, (*Berberry,*) Hexandria Monogynia.—The species are all readily propagated by seeds, suckers, and cuttings. Suckers are produced in abundance. If some of the strongest of these were removed, they might be formed into very handsome small trees. In all the species the flowers are yellow.

GENUS II.

Mahonia, (*Mahonia,*) Hexandria Monogynia.—The species are elegant evergreen shrubs with yellow flowers, propagated by suckers, seeds, and by cuttings. By some botanists the *Mahonia* is included in the genus *Berberis*.

ORDER VII.—CRUCIACEÆ.

The only shrub included in this order is the *Vella Pseudo-Cytisus,* (False Cytisus, or Shrubby Cress Rocket.

GENUS I.

Vella, (*Vella,*) Tetradynamia Siliculosa.—It is easily propagated by cuttings of the young wood, in sand under a glass.

ORDER VIII.—CISTACEÆ.

The hardy species are included in two genera, which are distinguished as follows—

Cistus—Capsule, ten, five-celled.

Helianthemum—Capsule, one-celled, three-valved.

GENUS I.

Cistus, (*Rock Rose,* or *Cistus,*) Polyandria Monogynia.—The Rock Rose is propagated by seeds, which in fine seasons they produce in abundance; and by cuttings.

GENUS II.

Helianthemum, (*Sun Rose,*) Polyandria Monogynia.—The Sun Roses are natives of Europe, and of the easiest culture, propagated by cuttings; they are beautifully adapted for rock or root work.

ORDER IX.—MALVACEÆ.

The only genus containing hardy species is *Hibiscus,* or *Althœa Frutex.*

GENUS I.

Hibiscus, (*Hibiscus,*) Monadelphia Polyandria.—The single-flowered varieties are propagated by seeds, which come true to their respective colours, and the double-flowered varieties by layers, grafting, and by cuttings in sand in autumn, covered with a hand-glass.

ORDER X.—TILIACEÆ.

The only genus which is perfectly hardy, is *Tilia,* native of Europe and North America.

GENUS I.

Tilia, (*Lime Tree,*) Polyandria Monogynia.—The Lime Tree is propagated by seeds, by layers in autumn, and by cuttings, though seldom adopted, the quickest methods being by layers and seeds. The wood of *Tilia Europœa,* or Common Lime Tree, is used by pianoforte-makers for sounding boards, and by cabinet-makers for a variety of purposes. It is carved into toys, and turned into domestic utensils, and small boxes for the apothecaries. It makes excellent charcoal for gunpowder. Shoemakers and glovers prefer its wood for cutting the finer kinds of leather upon. In Sweden, Norway, Carolina, and Switzerland the leaves are collected both green and in a dried state for feeding cattle: the Ancient Romans also used them as food for their cattle. The most important use of this tree is that of supplying material for ropes and bass mats, as used in gardens; the latter of which enter extensively into European commerce. The Russians use the bark for covering their cottages; the fishermen of Sweden make fish-nets of the fibres of the inner bark; the shepherds of Carniola make a coarse cloth of it, which serves them for clothing. In some parts of Devonshire and Cornwall we are informed that ropes are still made from its bark. The sap by evaporation affords a considerable quantity of sugar. Baskets, cradles, and light chairs, are sometimes made from the twigs.

ORDER XI.—TERNSTROMIACEÆ.

The hardy genera in our gardens are three, and are distinguished as follows:—

Malachodendron—Calyx, unibracteate; styles, free; carpels, capsular; five-connected.

Stuartia—Sepals, connected, bibracteate; style, one; capsule, five-celled, five-valved; seeds, wingless.

Gordonia—Sepals, distinct; style, one; capsule, five-celled, five-valved; seeds, winged.

GENUS I.

Malachodendron, (*Malachodendron,*) Monadelphia Polyandria.—Propagated by layers and cuttings.

GENUS II.

Stuartia, (*Stuartia,*) Monadelphia Pentandria.—A deciduous shrub of North America, a desirable plant, propagated by layers and cuttings.

GENUS III.

Gordonia, (*Gordonia,*) Monadelphia Polyandria.—These most beautiful plants are deserving of extensive cultivation; the soil should be leaf-mould and sand, propagated by seeds from America, layers, and cuttings.

ORDER XII.—HYPERICACEÆ.

These shrubs are natives of Europe, North America, and Asia. The hardy genera in gardens are two, and are thus distinguished:—

Hypericum—Capsule, membranous; stamens, polyadelphous.

Androsœmum—Capsule, baccate; stamens, monadelphous.

GENUS I.

Hypericum, (*St. John's Wort,*) Polyadelphia Polyandria.—These are all of

easy culture in common soil, and propagated by suckers, division of the roots, seeds, and cuttings. They are all considered medicinal, being powerfully astringent, and were formerly in great request by herbalists.

GENUS II.

Androsæmum, (*Tustan*,) Polyadelphia Polyandria.—This is a valuable plant for growing under trees, and in almost any soil, propagated by division of the roots.

ORDER XIII.—ACERACEÆ.

Deciduous trees or shrubs, natives of the temperate climates of Europe, North America, and Asia. The species in our gardens are included in the two following genera:—

Acer—Flowers, polygamous; leaves, lobed.

Negundo—Flowers, dioecious; leaves, pinnate.

GENUS I.

Acer, (*Maple*,) Polygamia Monœcia.—These are useful timber trees, propagated by seeds, layers, grafts, and by cuttings. The seeds of all the species may be sown in autumn, after they are gathered, or in spring. They come up, when sown in spring, in five or six weeks, with the exception of *A. campestre*, which seldom comes up till the third year. Sugar is one of the constituent parts of all of them. The ashes of the Sugar Maple, (*A. saccharinum*,) are rich in the alkaline principle, and it may be confidently asserted that they furnish four-fifths of the potash exported to Europe from Boston and New York.

GENUS II.

Negundo, (*Box Elder*,) Dioecia Pentandria.—There is only one species in our gardens, namely, *Negundo fraxinifolium*, propagated by seeds, layers, and cuttings.

ORDER XIV.—ÆSCULACEÆ.

Deciduous trees, natives of North America and Asia; by most botanists they are included in one genus, namely,

Æsculus, (*Horse-chestnut*,) Heptandria Monogynia.—The common Horse-chestnut is invariably propagated from the nuts, which are sown in the autumn or spring; the others by grafts, budding, and by cuttings. In France the Sabot is made from the common, and it is sometimes used by carvers and turners. It is also well suited for water-pipes which are underground. The ashes of the plant, and particularly the fruit, afford potash in quantity. The bark, which is very bitter, is employed for tanning, and also for dyeing yellow; and it is sometimes used as a substitute for Jesuits' Bark. In some countries the nuts are ground and mixed with horses' food; they are excellent food for deer, sheep, goats, and hogs. In Ireland they are used to whiten flaxen cloth; for this purpose they are rasped into water, in which they are allowed to macerate for some time. The nuts, when ground, are sometimes used in book-binder's paste. Soap and starch has also been made from the nuts. We are told in Stephenson and Churchill's "Medical Botany," that the remarkable vegetable principle, called *Æsculine*, is found in this genus, and is said to possess alkaline properties, and to act as a febrifuge.

ORDER XV.—SAPINDACEÆ.

There is only one hardy genus belonging to this order, namely, *Kolreuteria paniculata*—

Genus I.

Kolreuteria, (*Kolreuteria,*) Octandria Monogynia.—This too ought to be in every collection, on account of the beauty of its leaves, flowers, and fruit. It is readily propagated either by seeds, cuttings of the branches, or roots.

ORDER XVI.—VITACEÆ.

The genera which contain hardy species are three, and are distinguished as follow:—

Vitis—Style, wanting; petals, five.

Ampelopsis—Style, one; petals, five.

Cissus—Style, one; petals, four.

Genus I.

Vitis, (*Grape-Vine,*) Pentandria Monogynia.—The Grape-Vine is propagated by eyes, layers, cuttings, grafting, budding, and suckers.

Genus II.

Ampelopsis, (*Ampelopsis,*) Pentandria Monogynia.—These are, like the Vine, Tendriled Climbers, natives of North America, and are propagated like the Vine. *A. Hederacea* is the beautiful Virginian Creeper of the gardens.

Genus III.

Cissus, (*Cissus,*) Tetrandria Monogynia.—This plant is propagated by cuttings. We have only one plant of this genus, if it can so be called, namely, *C. orientalis,* (the Oriental Cissus, or Ivy-Vine.)

(To be continued.)

LIST OF BRITISH FOREST TREES, WITH THE METHOD OF PROPAGATION FOR EACH.

BY JOHN C. WIGHT, ESQ.

Acer, (Maple.)—Seeds sown as soon as ripe; layers in autumn, and grafting or budding on the common Maple. *Cuttings* will strike in the open ground if inserted in spring or autumn. Soil, sandy loam.

Æsculus, (Horse-chestnut.)—Layering, grafting, and budding, and some sorts by seeds. Soil, deep rich loam.

Alnus, (Alder.)—Layers or seeds. Soil, light loam in moist situations.

Betula, (Birch.)—Large species by seeds; and shrubs and other species by suckers and grafting. Deep dry soil.

Cerasus, (Cherry.)—Ripe seeds; layers, and *cuttings* from the roots, and suckers. Deep soil, sandy.

Cratægus, (Hawthorn.)—Seeds in spring; some varieties by buds or grafts on the common Whitethorn. Common garden soil.

Castanea, (Chestnut.)—Seeds, preserved in dry sand, in March; varieties by grafting. Soil, deep sandy loam.

Carpinus, (Hornbeam.)—Seeds, as soon as ripe, or kept dry till spring; suckers and layers for the varieties; layers for common plants are inferior to seedlings. Common soil.

Cedrus, (Cedar.)—Seeds in March; *cuttings* under a hand light; *C. deodara* by grafting on common Cedar or Larch. Deep sandy soil.

Fraxinus, (Ash.)—Seeds and grafts. Dry deep loam. (Seeds sometimes do not vegetate till second year.)

Fagus, (Beech.)—Seeds and grafts. Loamy soil over chalk. The *Morel* and the *Truffle* are found chiefly under Beech trees.

Ilex, (Holly.)—Seeds, (kept in a rot-heap for a twelvemonth to rot the pulp,) grafts, and buds, the first in March, and second in July; *cuttings* of the ripened summer shoots in autumn under glass. Soil, sandy loam.

Juglans, (Walnut.)—Nuts sown when ripe, or in following spring; grafting and budding for the rare species and varieties. Deep loam.

Pyrus, (Pear, Apple, and Quince.)—Seeds for stocks and new varieties; particular sorts by buds and grafts on wild sorts, and thorns; also by suckers. Good garden soil.

Populus, (Poplar.)—Seeds, sown in moist soil, slightly covered, as soon as they fall from the trees; *cuttings* of ripened shoots; also layers and suckers. Deep moist loam.

Platanus, (Plane Tree.)—Seeds in autumn or spring; *cuttings* in spring and autumn; but most quickly by layers at the above periods. Deep mellow loam.

Quercus, (Oak.)—Acorns, as soon as they fall from the trees; particular varieties by grafts. Deep loamy soil.

Robinia, (Locust Tree.) (?)—Tender kinds, from *cuttings* of young wood in sand, under glass; seeds in autumn or spring; *cuttings* of the shoots and also of the roots, and by suckers and layers.

Salix, (Willow.)—*Cuttings* of ripened shoots in autumn; dwarf kinds struck in summer under glass. Moist soil.

Tilia, (Lime, or Linden Tree.)—Seeds in March or April; principally by layers in autumn. Deep loam.

Taxus, (Yew.)—Seeds in October or spring; *cuttings,* ten inches in length, lower half deprived of leaves, in sand, in a shady part, in April and August. Deep loam.

Ulmus, (Elm.)—Seeds in June, March, or April. *U. campestris,* and its allies, by suckers, layers, and grafts on *U. montana,* layers of which root freely. Deep dry sandy loam.

Pinus, (The Pine tribe, including Firs and Larches.)—Chiefly by seeds; scarce sorts by *cuttings,* layers, and grafts. Deep rich loam.

1, *Percy Place, Clapham Road, London.*

SOME ACCOUNT OF THE LEPIDOPTERA ROUND EXETER.

BY MR. EDWARD PARFITT.

(Continued from page 128.*)*

The Purple Hair-streak, (*Thecla Quercus:*) this is a rare species in this neighbourhood; I have only heard of one specimen being taken, and that in Sir T. Acland's Park, by Mr. E. Norcombe, but I am of opinion that, were the oak woods searched for it, there might be more taken, for we have some considerable tracts of oak woods, such as Exmick Wood, and the woods about Dunsford are mostly oak, so I think more might be taken than we now anticipate, and, as I said before, I also think His Majesty the Emperor might be found sailing about in the sunshine. *Thecla Rubi,* (Green Hair-streak:) this Butterfly may be taken in considerable numbers on Haldon, at the back of Haldon House, the seat of Sir Laurence Palk; in August, 1850, it was particularly plentiful there. The Common Copper Butterfly, (*Lycœna Phlæas:*) this is not a very common insect about here, though many specimens are to be taken in a season. I took a rather curiously marked variety in Stoke Wood in 1851: the right anterior wing is almost white, except the margins, which are paler than in other specimens, but not white like the centre of the wing; the black spots too are unusually large on both the anterior wings; the left anterior wing is much darker than in most specimens; it is more suffused with black, so as to give it a dingy look; one dark wing and the other light gives the fly a singular appearance.

Polyommatus Argiolus, (Azure Blue,) is tolerably plentiful in some years, but not near so common as the following, *P. Alexis,* (Common Blue;) this you may see in most fields shut up for hay, flying about amongst the long grass in May and June. This, though a common species here, is not near so plentiful as it is in Norfolk; there I have seen it in great profusion, flying about in the parks and hay-fields just before the hay is cut. I possess a specimen taken last year, which I suppose to be a variety of *P. Salmacis,* or is it *Artaxerxes?* if so the markings do not accord with the description in the "Naturalist's Library." It is about the size of *P. Artaxerxes,* and has got the markings on the anterior and posterior wings like that insect, except the white spot on the middle of the anterior pair. The whole upper surface of the wings is of a dusky umber colour, except the band of triangular fulvous spots on the posterior margin: each triangular spot has a roundish black one at its base. There is also a small light crescent-shaped spot of four spots nearest the tail or anus; the two last, or those nearest the tail, are double, that is, the two are joined together, which is not the case with any of the others—they are decidedly distinct. The fringe on the wings is dusky, and the whole under surface of the wings is precisely like the female of *P. Alexis;* the markings are exactly like that insect. Is it a variety of that species, or what is it?

I had almost forgotten one of our finest insects, the Clouded Yellow, (*Colias edusa:*) this beautiful butterfly is caught in some quantities at Exmouth, but,

curious to observe, they generally number more males than females: Mons. Persae has taken a good many, but almost all of them are males. In September, 1850, I took a fine female speeimen near Sandy Gate, about three or four miles from Exeter. I had a non-scientifie friend with me at the time, who is a eolleetor merely for colleeting's sake, and in looking round a sand-pit we started the fly, or rather the fly started us. There was a pretty stiff breeze blowing at the time, and I may mention it was the first Clouded Yellow I had ever seen on the wing, and I had not a speeimen in my possession, so you may think how delighted I was; I would have ran till all was blue, (as the saying is,) rather than have lost it. Well, as I have said, the fly started us, and away we go, net in hand, up the sand-pit, and away across the road, the fly going along before the wind with all sail set, (as the sailors would say,) over the hedge, and away we go after it. By the time we had got over the hedge, (I lost my hat in the seramble,) the fly had got some distance aeross a turnip-field; I, being light-built, soon outran my eompanion, and eaught the fly. An old farmer and his men were in the next field, and I dare say thought we were mad; for, seeing us running as hard as we eould tear after a butterfly, (and my hair flying behind must have given me the appearanee of being insane,) the old farmer bawled out, "What's e matter with yea, be e mazed;" (mazed is the Devonshire word for any one insane.)

Thus ends my list of the Butterflies round Exeter. In my next I will give a list of the Hesperidæ, Moths, etc.

4, *Weir-field Place, St. Leonards, Exeter, April* 18*th.*, 1853.

Miscellaneous Notices.

The Badger, (Meles taxus.)—A fine characteristically-coloured specimen was obtained about the end of January this year, at some distance from Aberdeen, and is now in the possession of Mr. A. Mitchell. It is becoming very scarce throughout every district of this county.—J. Longmuir, Jun., Aberdeen, March 10th., 1853.

Malformation of the Teeth of the Rabbit, (Lepus cuniculus.)—Mr. Mitchell, Taxidermist here, obtained a Rabbit, apparently a full-grown one, with very curiously-formed front teeth. The two upper incisors were curved up within the mouth, being very much longer than usual, as were also the lower ones, which projected considerably, with a slight bend upwards. It would be a difficult matter to conceive how the poor animal could have lived for any length of time in such a condition, and yet, when shot, it was by no means lean.—Idem.

Amongst the "Miscellaneous Notices," of the last No. (June) of "The Naturalist," the Rev. F. O. Morris has brought forward an instance of a Rabbit taking to the water and swimming. I much doubt whether in cases of exigency the Rabbit will *ever* hesitate to do so. The two following instances occurred under my own observation:—Some time last year, I am not positive as to the precise date, I saw a Rabbit, pursued by a dog, leap boldly into the Cam, at one of its greatest widths, and was swimming across, when a boat put off and captured it. Again, on the 16th. ultimo, at the Rabbit-warren, Thetford, in Suffolk, a pursued Rabbit, a very young one, dashed into a small streamlet that intercepted its run, and swam across; it was however soon caught—its wet coat prevented any speed in its flight. I have mentioned these two instances to shew that Rabbits will take water; but both times emergency forced them. I have heard of no instance of a Rabbit being *fond* of water.—H. C. Stuart, Bath, June 7th., 1853.

Occurrence of the Rose-coloured Pastor, (Pastor roseus,) *in Norfolk*.—A labourer shot, on Tuesday, May 3rd., a fine male specimen of this bird at Lakenham, a village a short distance from this city. A specimen of this bird was shot in the same locality, and nearly about the same date last year.—J. O. Harper, Curator of the Hospital Museum, Norwich, May 8th., 1853.

Tufted Pochard, (Fuligula cristata.)—A fine male specimen of this bird was shot on the Tees by Mr. R. Hornby, of this town, on the 17th. of March, 1853; also two males and two females were shot on the Tees, by Mr. T. Hodgson, of Portrack, and Mr. T. Laverick, of this town, on the 28th. of March, 1853.—W. Martin, Stockton-on-Tees, March 31st., 1853.

Goosander, (Mergus merganser)—A fine female specimen of this bird was shot on the Tees, by Mr. F. Leach, of Middlesbro', about a fortnight since. There was also a fine male specimen shot at the same time, which had in its gizzard part of a gold ear-ring.—Idem.

The Golden Eye Garrot, (Clangula vulgaris.)—A fine old male specimen of this bird was shot on the Tees, about two miles below this place, by Mr. J. Hodgson, of Portrack, on the 26th. of February last.—Idem.

The Little Auk, (Mergulus Alle.)—One of these birds was seen the other day in the Cut below this town, but was not captured.—Idem.

Land Rail, (Crex pratensis,) *in February*.—On the 19th. of the present month some boys pursued and killed a Land Rail in a field, about a mile from this town, in the shire of Kirkcudbright. The said bird was brought to me in the flesh; it was an adult in fine plumage, and was in good condition. "That it is a bird of passage there can be little doubt," says Markwick, and this is the general impression; but the above says, I am no bird of passage for this year at least. This has been a very severe winter, more particularly for six weeks past. We have flocks of Mountain Finches with us just now, and some Crossbills also.—W. G. Johnstone, Green Brae Cottage, Dumfries, February 28th., 1853.

The Water-hen, (Gallinula chloropus.)—Whilst shooting lately on the banks of the Derwent, a few miles from Derby, near a large orchard, my dog put out a Water-hen from the top of a high bank; it flew across the river, and perched on the top of an alder tree, some twenty-five feet high, and whilst sitting there with outstretched neck, watching the dog, I shot it. Soon afterwards I met the gardener, and on observing to him that I had rarely seen a Water-hen perched on a tree, and never one so high, he told me that he had not only frequently remarked the same, but had seen them on the apple trees, pecking at the apples. I have never before heard such an accusation brought against the Water-hen, but have no reason to doubt the man's veracity.—J. B., Marlborough, March 29th., 1853.

The Rock Dove, (Columba livia.)—Although Rock Doves are most frequently found among cliffs near the sea, yet this is not always the case. Two or three pair build every year in a steep and lofty range of sandstone rocks, called the Black Rocks, near Matlock, in Derbyshire, about one hundred miles distant from the nearest sea. I have frequently taken the eggs of these birds. Their nests were built in holes of the rock, generally near the entrance, and were invariably made of the same materials, namely, the *fresh green tops* of the Scotch Fir, which grows in great abundance near. The eggs are about the same size as those of the Tame Pigeon, but more spherical and of a deep cream-colour.—Idem.

The Whinchat, (Saxicola rubetra.)—I have to intimate to you a very early and most unusual appearance of the Whinchat. I was passing through Hyde Park, and close to where the Crystal Palace stood it was perched on the wood railing, separating the park from the carriage drive through it; I watched it attentively for some moments as it stood giving its peculiar jerk to its tail; it then flew to the opposite railing, and there continued for some moments more, enabling me to take a view sufficient to allow a mistake to be impossible. I should have thought it an escaped bird from a cage or aviary, but its plumage was in such perfect order that I do not think that possible. This bird I saw yesterday morning, the 8th. of March, now all works on the subject state the middle of April to be the time of its re-appearance in the southern and midland counties, and the end of that month in the more northern. I have at times shot scores of these birds, and consequently know it too well to be mistaken: in the summer when

dead, they putrefy in a remarkably short space of time, and while skinning them the fat is so oily and in such quantity, that the feathers frequently become saturated with it from the heat of the fingers alone.—C. H. Brown, Fulham, March 9th., 1853.

Note on the Swift.—On the morning of the 1st. of November, 1846, a Swift, (*Hirundo Apus*, Lin.) was observed flying round, and occasionally settling on the rigging of the Steam-Packet while landing passengers at Brighton pier, having accompanied the packet from Dieppe in a dense fog; it had probably retired to roost the evening before amid the rigging, near the funnel, perhaps for the sake of the warmth it might afford. The vessel started on its voyage several hours before daylight, our voyager was half way across the channel ere he was "awake," and then poor fellow such was the extreme density of the fog that he became no doubt quite bewildered, and not knowing which way to steer his course, continued to play round the packet till it reached Brighton, as before stated.---Stephen Stone, Brighthampton, March 11th., 1853.

Honey Buzzard, (Pernis apivorus.)—Dr. Macgillivray mentions that this species has been found breeding in the woods of Abergeldie, which is perhaps the only instance of the kind in Scotland. This *rara avis*, in the north of Scotland at least, has occurred once or twice in various parts of our county; and when it *does* appear, its colour and size render it a conspicuous object. The last one of which I have heard, was shot a year or two ago at Raeden, in the immediate vicinity of this city.—J. Longmuir, Jun., Aberdeen, March 10th., 1853.

Snowy Owl, (Surnia nyctea.)—This rare visitor has been met with in a few instances in Aberdeenshire. One specimen was obtained near the "Buck of the Cabrach," on Donside, in the spring of 1850, by Mr. A. Stuart, Aberdeen; and some time after, another was shot near the same locality, both of which were marked in the usual way; the colour of the one being, however, considerably lighter than that of the other. Mr. A. Mitchell mentions having seen a Snowy Owl a few years ago, when walking along the beach at Aberdeen.—Idem.

Bohemian Waxwing, (Bombycilla garrula.)—This plainly-coloured winter visitant has again appeared in this quarter, a small flock having been observed in the neighbourhood a few weeks ago. Only one specimen was obtained, which proved to be a young individual, and the curious red tips on the wing feathers were wanting.—Idem.

The Hawfinch, (Coccothraustes vulgaris.)—Two specimens of this bird, which is of rare occurrence in the north of Scotland, were obtained a few years ago in the neighbourhood of the village of Upper Banchory, and sent to Mr. Mitchell's, Taxidermist, where they were recognized by Dr. Macgillivray.—Idem.

Additional Heronry.—There has been for many years a small Heronry at Edinlassie, parish of Strathdon, Aberdeenshire.—Idem.

Heronries.—Having noticed a list of the Heronries of England in a former number of "The Naturalist," I was rather surprised to observe that the North-western Counties, Cumberland and Westmorland, were omitted; but lately I saw noted that an island on Windermere had been selected by a couple of Herons to breed in. A Heronry on the domain of Lady le Fleming, on Rydal Lake, has been for years celebrated in the north as the spot most favoured by Herons, and an island on the lake formed their nursery. These birds may be seen constant visitors of the waters amidst the mountains of the north. I have noticed them at the remote lakes, particularly Buttermere; when the margin of the water is frozen during the frosts of winter, they may be seen wading in search of food, before a flight of some miles to their favourite haunts, for they do not appear to breed near Buttermere. The nearest Heronry to that lake is, I believe, Bassenthwaite, on the property of Sir Henry Vane. Some Herons, I was informed by a local fisherman, breed here, but their numbers are few, and consequently the Heronry is little known. W. C. Rothery, Weymouth, December 20th., 1852.

Occurrence of the Merlin Hawk, (Falco æsalon,) *in Devon.*—A young bird of this species was shot by my brother on October 27th., 1852, whilst in the act of devouring a Yellow Bunting, in the Laira Marshes near Plymouth. This is the only specimen I have heard of being obtained in the locality of Plymouth, for many years. R. A. Julian, Emmanuel College, March 9th., 1853.

Occurrence of Richard's Pipit, (Anthus Richardi,) *in Devon.*—A fine specimen of this rare British species of birds, was shot by my brother in the Laira marshes near Plymouth, January 28th.,

1853. This I think makes the seventh in number that has been obtained in this locality during the last eight years. All of these frequented pasture land, which had not known the plough for probably half a century. My brother describes this bird as being very shy, and its note, which at first attracted his notice, being somewhat more melodious than that of the Sky-Lark. November and January are the chief months during which they have been obtained.—Idem.

Red-backed Shrike, (Lanius collurio.)—A nest of this bird was taken at Swanscombe, in 1848, on a branch of an elm tree, twenty feet from the ground.—M. C. Cooke, Lambeth, Surrey, March 8th., 1853.

Gray Phalarope, (Phalaropus lobatus.)—A specimen was shot while swimming in the Thames, off Swanscombe, in the autumn of 1845, by Mr. Johnson, Sen., and preserved.—Idem.

Black Sparrow, (Passer domesticus.)—A Sparrow entirely black, was brought a few days since to Mr. Arlett, of Swanscombe, Kent, for preservation: it was perfectly clean, and had no traces of markings upon it.—Idem.

Nest of Yellow Bunting, (Emberiza citrinella.)—A year or two since, a friend of mine at Swanscombe, took a nest of the Yellow Bunting in that locality, in a bush at the unusual height of twelve feet from the ground.—Idem.

Gannet, (Sula alba.)—An adult specimen of this bird was found wounded in a turnip field at Swanscombe, in the spring of 1847, and preserved.—Idem.

The Hawfinch, (Coccothraustes vulgaris.)—A male specimen of the Hawfinch was shot at Hemingston, in the month of March last.—Henry Lingwood, Barking, Suffolk, April 13th., 1853.

Early occurrence of the Clouded Yellow Butterfly, (Colias Edusa.)—Mr. John Gatcombe, of Plymouth, informed me to day, August 2nd., 1852, that on Friday last, July 30th., he captured a male of this species at Mount Edgcumbe. During last September and October, I saw nine of these Butterflies, out of which six were females. Previous to this season, I have found the males to average at least twelve to one female.—R. A. Julian, Emmanuel College, March 9th., 1853.

Occurrence of Couch's Polyprion. (Polyprion cernium.)—A fish was captured in Plymouth sound, August 1852, and taken to Mr. John Bellamy, who not having previously seen one of the kind, forwarded a description of it to Mr. Yarrell, and he pronounced it to be one of the above species.—Idem.

Pike Fishing Extraordinary.—On Monday, the second son of Mr. Stordy, Thrustonfield, a boy eight years of age, succeeded in hooking in the lough at that place, and bringing to land, a pike of the enormous weight of fifteen pounds and a half. The juvenile fisher employed an ordinary cord line and double hook, baited with a portion of eel; and it may be mentioned that he was unable to lift his prize from the ground and carry it home without assistance.—Gateshead Observer, March 26th., 1853.

Anglesey Morris, (Leptocephalus Morrisii.)—This beautiful little fish has been found on our beach at various intervals. The colour is pure white, the eyes are jet black, and the spinal cord appears like a fine silvery thread, running through the entire length of the delicate and translucent body.—J. Longmuir, Jun., Aberdeen, March 10th., 1853.

Review.

The Marine Botanist; an Introduction to the study of the British Sea-Weeds, containing descriptions of all the species, and the best method of preserving them. By Isabella Gifford. Third Edition, with Illustrations printed in oil colours by W. Dickes. Brighton: R. Folthorp. London: Longman and Co.

The study of Marine Botany has, of late years, become so general, that no apology is necessary from any one who offers any increased facilities for

its prosecution. The volume now before us is rendered doubly interesting from the fact of its being from the pen of a lady, who has had ample opportunities of acquiring the information which she thus pleasantly offers to the students of our Marine *Algæ*.

She commences by an interesting introduction of some forty pages, in which she fails not to point out the dependance of all created Nature upon that Almighty Being, at whose word worlds were formed, and who yet condescended to exhibit His majesty in the wonderful organization of many minute, but not on that account insignificant creations.

The next and largest portion of the work, is devoted to the description of the Families, Genera, and Species of Sea-Weeds indigenous to our shores. These descriptions are concise, but clear and good, and the student will find little difficulty in naming his specimens by them. We regret however that in some few, and they are very few, instances, the promise on the title-page is not *fully* carried out; certain of the very rare plants not being described. We trust that Miss Gifford will forgive us for illustrating our remark by one quotation.—Page 115, "*Polysiphonia spinulosa*—an extremely rare species, of which only one specimen was found by the late Captain Carmichael, at Appin, Argyle." This can hardly be said to be a description; but we should not have thought it worthy of remark except for the notice on the title-page, to the effect that there were descriptions of *all* the species. Notwithstanding this very trifling drawback, we can recommend "THE MARINE BOTANIST" as a very useful and valuable book, and we do most sincerely hope that a *fourth* edition may soon be required, in which these deficiencies may be supplied. This being the *third edition*, is a pretty good proof that the omission has not, so far, interfered with its usefulness.

The work concludes with a Glossary of terms, and plain, though short, directions for "collecting, laying down, and preserving Sea-Weeds." The descriptions are illustrated by twelve plates, in which thirty species are faithfully figured. Six of these plates are coloured, and are extremely good substitutes for the plants themselves. That of *Porphyra laciniata* struck us as being not only an extremely pretty drawing, but as nearly as possible a *fac-simile* of the plant itself. We trust we have said sufficient to induce very many of our readers to become purchasers of the subject of our notice.

The Querist.

Perhaps some one of the numerous readers of your interesting pages can inform me whether there are any well authenticated instances of the occurrence in England of the Thrush Warbler, *(Philomela Turdoides;)* I shall be also glad to know whether the Great Northern Shrike, *(Lanius Borealis,)* has ever paid a visit to our shores.—*J. Cavafy*, Brighton, May 7th., 1853.

Bird's Eggs.—H. S., of Richmond, may procure any eggs that he may require of J. E. Warwick, Naturalist, 23, New Street, Kennington Road, London.—*J. O. Harper*, Norwich, May 8th., 1853.

Having taken some eggs that I am not acquainted with, I shall feel obliged to you if you will, through the medium of "The Naturalist," inform me what they are from the following description:—The nest was built something like that of a Thrush, on the bow of a fir tree, growing near the water, and about fifteen feet from the ground; the eggs are blue, resembling in size and colour those of the Thrush, but instead of the black spots, they are marked with small reddish brown ones all over, but chiefly at the larger end.—*H. Buckley*, Calthorpe Street, Birmingham, May 13th., 1853.

Wood Anemone, (Anemone nemorosa.)—Seeing a difference in "The Naturalist," between two correspondents on the subject of the general colour of the Wood Anemone, I beg leave to forward observations which I have made on that subject.—I have watched from their first appearance a great quantity of the Wood Anemones which cover the banks of a stream, running at the foot of a wood, in Callaghan's Glen, near this city. There are also large quantities of the pretty flowers in the "Groves of Blarney," and woods in the vicinity. All, without exception, are white, or have so pale a flush of lavender on the under surface of the petals, that they may be considered as such. I remember that the Anemones in Devonshire are more deeply tinged with lavender or purple, unless they have changed since last spring, than those in the neighbourhood of Cork. I cannot therefore account for this difference in colour, since both kinds were growing in most luxuriant soil: the climate of Cork approaches nearer to that of Devon than any other county of Ireland.—*Thos. G. B. Atkinson*, Cork, May 14th., 1853.

Common Reed, (Arundo Phragmites.)—In reply to the query, page 64, how to propagate and cultivate the Common Reed. This well-known grass is the tallest of the British *Gramineæ*, growing naturally by the banks of rivers and edges of pools; but it grows to the greatest perfection on rich alluvial deposits which are occasionally flooded by fresh-water tides. On the north banks of the Tay, in the Carse of Gowrie, Scotland, there, as well as in many of the low lands of Huntingdon, Cambridge, and Lincoln, it constitutes the crop of the soil, and is harvested with much care; and from these places it is exported to the neighbouring counties to be made use of for thatch for barns, cottages, and out-houses, and is perhaps the most durable vegetable-covering for roofing that is employed. Your best plan to be successful with it will be to secure large batches of soil, containing its powerful creeping roots, in autumn, or early in spring, making holes round your pond, and insert these batches of plants in them, covering and surrounding them with some good alluvial soil; by this simple process you will perfectly succeed. In this manner we have succeeded with it round ponds of a gravelly and chalky bottom in the counties above-named. The injury that is done towards the end of autumn to this crop by birds is so great, that the farmers of these reedy districts, we are informed, are obliged nightly to despatch boats with fire-arms to frighten them away. As evening advances, it is no uncommon occurrence to see clouds of Starlings, *(Sturnus vulgaris,)* approaching from every quarter to pass the night in the reeds, upon which, after various arrangements, similar to the Rooks, they alight in myriads, bearing the reeds down by their weight into the water; and though the guns of the boatmen destroy many, the survivors are so drowsy that they remain stationary, or rising, settle immediately again over the bodies of their slaughtered companions, returning evening after evening in numbers not apparently diminished. Foxes collect in the reeds to diet on the poor Starlings, catching them on the roost, as well as the dead and disabled ones. The panicle of this grass continues through the winter, affording food to the beautiful *Parus biarmicus*, or Bearded Tit, and many other seed as well as insect-eating birds. The Bearded Tit feeds mostly upon its minute seeds, and insects. The panicle of this grass will dye wool of a greenish colour. When once this grass gets thoroughly established, it is the most troublesome to eradicate, as may be seen in some of the best alluvial soils in the Carse of Gowrie, which have been under cultivation for more than a century, and yet the *Arundo Phragmites*, or *Phragmites communis*, grows as luxuriantly amongst the cultivated crops as it did at the first.—*J. Mc Intosh*, 5, Middle Street, Taunton, March 4th., 1853.

I have lately had some chrysalides of the Swallow-tail Butterfly, some of which were of a dull cream-colour, with blackish brown marks and streaks on the wing cases, sides, and head: and others of a greenish yellow, the wing cases light green, and a row of dots of the same along the sides.—What is the account of this?—*F. O. Morris*, Nafferton Vicarage, Driffield, May 24th., 1853.

BRITISH MUSEUM NATURAL HISTORY.

NOTES ON THE HERON, (*ARDEA CINEREA.*)

BY W. G. JOHNSTONE, ESQ.

It was a delightful morning, the 4th. of April, when we awoke, our thoughts intent on the pilgrimage about to be performed, to see for the first time not only a Heronry, but one situated in that small lake where steam, as applied to propelling vessels, first was tried, and that successfully.* The place in itself is surpassing lovely, embosomed amongst slightly undulating green hills, with those of a sterner cast in the back ground, clothed to their summits with the Tasselled Larch, (*Larix,*) and our hardy native Pine, (*Pinus sylvestris;*) and extending again beyond these may be seen the heath-clad mountains, where, in the words of the poet,

> "The martyrs lie;
> Where Cameron's sword and his bible are seen,
> Engraved on the stone where the heather grows green."†

Indeed all around is sacred ground—the lake before us, Burns' (our national poet,) Farm at Ellisland immediately behind us, Queensberry‡ looking down upon us, surrounded on all sides by mountains till the chain is completed by the dark-browed Criffel, which guards the entrance to the Solway.

But to the matter in hand; as I have before stated the Heronry is situated on a small island in the lake. I was very particular in my examination of it. The Heronry consists of forty-nine nests in all, of which two nests are on birch trees, three on silver firs, four on ash, four on oak, four on larch, seven on spruce, and twenty-five on elm; thus showing they are not at all particular as to their choice of any one species of tree. I could not be sure of how many birds there were, but I believe there would not be fewer than eighty to ninety—forty or forty-five pairs; but from the screaming way they fly about when one intrudes on their dominions, it is no easy matter to count them. Though the nests are more numerous than the birds I have stated, there might be, as I have no doubt there were, some of them old and untenanted. The nests I observed are all placed, if not on the very summit of the trees, at least as high as may be, and on the extremity of the branches, no doubt that they may get easily into their nests, for did branches intervene they would have difficulty in so doing; it is a most ludicrous sight to see their long legs twirling about like as many Churn-staves before descending into their nests.

* The tiny little steamer was launched on the 14th. of November, 1788. The parties in the boat were Patrick Miller, the Inventor; Robert Burns, Poet; Alexander Nasmyth, the celebrated Landscape Painter; Henry (now Lord) Brougham, who was then a young lad at school; and Mr. Taylor, the Engineer. Thus showing priority to Fulton in America, or Bell in Renfrewshire.

† It was in Sanquhar, among these hills, that Cameron's followers published their declaration on the 22nd. of June, 1680; and it was in the old fortress of Sanquhar that King James VI. slept one night—August 31st., 1617.

‡ Queensberry, a lofty mountain in the upper part of Dumfriesshire.

BRITISH MUSEUM NATURAL HISTORY.

Before the Herons got established in their possessions, they and the Rooks, (*Corvus frugilegus,*) had a severe, or rather a series of severe battles, but Mr. Heron came off victorious, and now woe to the poor Rook who ventures on the island. I have heard it stated that the legs of the Herons might be seen out of the nest behind while sitting; this is not the case. The nest is formed very much like that of the Rook's, in many cases no larger; the eggs, generally three in number, are of a beautiful green colour, varying somewhat in shape, but about the size of the domestic fowl's; some of them are ovate, pointed at the lower end; others are pointed at both ends. I noticed many of the male birds with splendid crests, others of them very small; it may be that some never have that appendage so full as others, or that the latter are younger birds, for at least two years are required to perfect the Heron's plumage.

Altogether a Heronry is a most interesting sight, no less from its novelty than a romantic beauty peculiarly its own. We wonder much to hear of parties having such in their possession, destroying them. The birds do no injury, their food consisting of eels, frogs, and the like; indeed they only establish themselves in the vicinity of waters where such are to be found, and are more benefit than otherwise. Rookeries are allowed and cherished—aye, noisy Rooks—and why not the gentle Heron—a more interesting bird we have not on our island; one, too, associated with by-gone days, when the cry used to be at dawn of day—

"Waken lords and ladies gay, &c."

Not as now—

"Up in the mornings no for me."

It may be well also to state that several pairs of Herons have this year, for the first time, built their nests in a wood at a short distance from the lake; not certainly for want of room on the island, "but every man to his humour," as Shakspere says.

Having said so much regarding the Heronry, we must take notice of four other friends claiming our attention. Two by their restless activity, the Water-hen, (*Gallinula Chloropus,*) and the Coot, (*Fulica atra;*) two by their subdued quiet beauty, the Wild Duck, (*Anas boschas,*) and the lovely little Teal, (*Querquedula crecca.*) The two former breed on and around the lake; the two latter disappear about this time, returning again generally in the course of a few months with a goodly addition to their numbers.

A deserted Dove-cot on the island is tenanted by a pair of White Owls, (*Strix flammea.*) The Frogs, (*Rana temporaria,*) are swimming about most lustily.

Walking around the lake, our face turned homewards, we had the pleasure of seeing some pairs of the Long-tailed Titmouse, (*Parus caudatus,*) and the Cole Tit, (*Parus ater,*) both of which breed here in abundance. When we

did see them our mind was musing on these most true lines of the great Schiller.—

"On the mountain is Freedom! the breath of decay
Never sullies the fresh flowing air;
Oh! Nature is perfect wherever we stray;
'T is man that deforms it with care."

Greenbrae Cottage, Dumfries, April, 1853.

NOTES ON THE TREE SPARROW, (*PASSER MONTANUS,*) WITH A FEW REMARKS UPON SPARROW CLUBS.

BY STEPHEN STONE, ESQ.

A colony of Tree Sparrows has been established at Standlake, Oxfordshire, for many years, and so numerous have the pairs of birds composing it become, that I have known of twenty nests in a season, within the range of a shot from an ordinary rifle.

As a good deal has been said and written about the different situations chosen by these birds, for building their nests, in different parts of the country, I may perhaps be excused if I record here the situations of these twenty nests. One, then, was placed in a stack of faggot-wood, about three feet from the ground; one in the hole of a decayed limb of a maiden elm; six, in holes, in the head of pollard trees—two of the ash, and four of the willow; and the remaining twelve in holes of decayed apple trees, in orchards.

They seem to adopt precisely the same rule in nest-building as that adopted by their near relatives, the House Sparrows, which is to adapt, in the most admirable manner, the shape and substance of their nests to the situations in which they are placed. Thus, if much exposed to the weather, the nest is composed of a vast quantity of materials, is profusely lined with feathers, and completely domed over; a small aperture only being left for

"Their exits and their entrances."

If less exposed, a smaller quantity of materials is employed, the lining is more scant, and it is only partially domed over. While in a very snug and sheltered situation, the materials are more scanty still, and the dome is entirely dispensed with.

Thus here, as in innumerable other instances amongst the feathered tribes, an amount of intelligence and discrimination is displayed, little, if at all, inferior to that possessed by man, with all his boasted wisdom.

As far as my experience has hitherto gone, no bird can be more constant in the number of eggs it produces than is the Tree Sparrow; for in the many dozens of nests, containing their full complement of eggs which I have examined, the number has invariably been five. There was a peculiarity too, in reference to those eggs so constant, that I cannot pass it over unnoticed, which was this:—that although no two sets of them were exactly alike; yet each set,

without a single exception, was composed of four dark-coloured eggs, closely resembling each other, and a fifth of so light a colour as to form a striking contrast to the rest. I should like to know, from the observations of others of your numerous correspondents, whether this peculiarity would seem universally to prevail, or whether it is only to be considered as an accidental or a local peculiarity. I have not yet ascertained whether this light-coloured egg is the last laid or the first, or whether there is no precise rule respecting it, but will endeavour to satisfy myself upon that point this season.

I much fear, however, that as certain other colonies have within our own recollection, suffered from the impolicy of those who ought to have been their protectors; so this colony of pretty, interesting, and useful birds is about to suffer from a like source, namely, the impolicy of those whose protection and encouragement it ought to have, and which, were they not wholly blind to their own interests, it undoubtedly would have; alas! instead of protection (the British farmer used to have that word constantly on his lips, and moreover used to rejoice mightily at the sound thereof; but protection, in so far as relates to the importation of foreign corn, having been, by an act of the Legislature, withdrawn from him, he seems determined, most likely in a fit of utter desperation, to tear away, in the most suicidal manner, every remnant of that protection which is still left him, and which the Legislature has not, in its wisdom, yet thought fit to interfere with, namely, the protection of his crops from the ravages of wire-worm, grub, or caterpillar which the feathered tribes afford him,) a war of extermination is forthwith to be commenced and carried on against these little creatures; for one of those mischief-working associations, and very great nuisances, yclept a Sparrow Club, has just been formed; so that unless a Waterton—Honour to him of Walton Hall! for the zeal and energy with which, during the course of a long life, he has advocated the cause of the various creatures which, though occupying a less-exalted position in the scale of creation than man, are yet fulfilling, in the several stations assigned them, (can this be said of man?) the beneficent designs of their Great Creator. May he be enabled to continue active in that cause for years yet to come; unless a Waterton should haply rise up here, (would that each district could boast of one,) and convince the members of the Club of their extreme folly before it be too late; woe betide the poor Tree Sparrows!

The late Sir Robert Peel was supposed to have inflicted a terrible blow upon the agricultural interest in his repeal of the corn laws; and loud and bitter were the complaints against him in consequence of that act; but I much mistake if a blow, far more deadly, is not being aimed at that interest by the agriculturists themselves, in their destruction of Sparrows, Rooks, etc. The small quantity of corn, in its soft state, that is before it becomes perfectly ripe, which is the only state in which they have a great fondness for it; and to which they can, of course, only treat themselves for two or three weeks in the year, is compensated for, ten thousand times fold, by the vast numbers of grubs, caterpillars, and other root, branch, and

leaf-devouring vermin, which they destroy during the rest of the year.

O ye members of Sparrow Clubs let me entreat each of you, when next your gun is levelled at a Sparrow or a Rook, to pause and consider that although you may have a pint or two more of corn this year by shooting it, you will, in the course of time, have not only pints but bushels extra of grubs, caterpillars, etc. in your gardens, orchards, and fields; the produce of the numbers which that bird would destroy if you decide, as I trust you will, on letting it live. By depriving it of life you will assuredly place yourself amongst the number of the "Penny wise and pound foolish;" for just, I pray you, consider what these extra bushels of grubs will do for you. They do not content themselves, as do the Sparrows, with eating a few grains of your corn; they "strike at the very root" of the plant, carrying on the work of destruction in the dark. And as you know that "striking at the root" of anything is the only effectual way of eradicating it, so would these grubs, but for the check upon their increase by birds of various kinds, effectually eradicate every plant you are in the habit of cultivating.

But even the Titmice, (*Paridæ*,) are included in the rules of this (Standlake) Club amongst the species to be destroyed, and for what? In what, pray, consists *their* great offence? Does it consist in their being seen prying amongst the buds or leaves of the fruit trees or shrubs in our gardens? I shall endeavour to show, that so far from their being guilty of an offence in this, they are thereby conferring upon us an incalculable benefit; for what is it they are doing there? Why ridding those trees of thousands of aphides and small caterpillars, which would otherwise entirely denude them of their foliage, and leave no chance of either fruit or blossom.

In yonder cranny in the wall is the nest of the Blue Titmouse, (*Parus cæruleus*,) in which a small family, of twelve or fourteen individuals, is being reared. Let us station ourselves near this nest, and observe what kind of food it is with which the parent birds supply their infant progeny.—Every two or three minutes, one or the other of them is seen to enter the aperture leading to the nest; and what has it in its beak every time it enters? Is it a grain of wheat, barley, or oats?—No! Is it a bud from a neighbouring currant, gooseberry, plum, peach, or apricot tree?—No! It is a small green caterpillar, or kindred grub, which had been preying upon the buds or leaves of one or the other of those trees, and for this these birds are to be destroyed!!!

Can it indeed be possible, that in the year of our Lord one thousand, eight hundred, and fifty-three, in one of the most enlightened nations upon earth, and within sight of the spires of that nation's greatest seat of learning, men are to be found banded together for the sole purpose of destroying, and utterly exterminating their benefactors; and amongst others this most assiduous and constant one, small though it be, the Titmouse. Alas! it is more than possible—it is a fact.

Brighthampton, near Witney, Oxon., May 7th., 1853.

NOTES ON THE BIRDS OF IONA.

BY HENRY D. GRAHAM, ESQ.

(Continued from page 3.)

The Black Guillemot, *(Uria Grylle.)*

The Black Guillemot is a constant resident around our coasts, and in every boating excursion it may be frequently met with, both in summer and winter. Perhaps it is rather more numerous in summer, for then small flocks are to be found clustering around all the more unfrequented islets, which are haunted by them for the purpose of incubation.

Here, during the breeding-season, they will be seen in full activity, diving in pursuit of small fry, and flitting to and fro between their nests and the surface of the water; while others sit erect, ranged along the rocks overhanging the sea, gasping out a plaintive, wheezing noise, something like the complaining of a set of very young kittens. This seems to be their only cry, for, except at this time of year, they are entirely mute.

The nests are concealed in all manner of out-of-the-way holes, under large detached rocks, in deep crevices, or in small caves; and in general the nest is so far in as to be beyond reach, after the place of its concealment has been discovered, except with the assistance of a boat-hook, or something similar. I have never found the number of eggs to exceed two, which have some resemblance in colour and marking to some of the small Gulls' eggs; but there is a characteristic peculiarity about their appearance which easily distinguishes them from those. The young are covered with brownish black down, and will greedily take bits of fish from the hand soon after their capture, and may easily be reared.

The plumage of the old birds now is black, with a greenish gloss, or rather a perfect bottle-green, beautifully relieved by the pure white patch upon the wing, and further enlivened by the brilliantly red feet: the inside of the mouth is also of a very rich tint of orange. The birds are not all equally beautiful, some (probably the hens and younger males,) are of a dull brownish black, and the white patch on the wing is obscured.

In winter their appearance is totally changed; they are then to be seen about the coast a little way out at sea, but seldom coming very near to land; and the variety of plumage to be observed among different individuals is very great, for scarcely two are to be seen exactly similar. In the depth of winter the whitest ones are to be got. These are entirely pure white, except a small portion of grey upon the back, connecting the wings, which remain black, as in summer. The appellation of *Greenland Dove* is much more appropriate than that of *Black Guillemot*, when seen under this aspect. But it is only a few that acquire this degree of purity; the upper parts are generally more or less marked with grey, or sometimes black, while the under parts are mottled with black and white; some even retain their black dress entirely. The young birds are blackish brown above, and white underneath; the upper

plumage turns to grey as winter comes on; the white patch on the wing is very much clouded with black spots; and the legs are of a dull brownish red.

This Guillemot is a very tame bird, and easy to be shot, as it allows a boat to approach very near before it takes flight. They seldom attempt to escape by diving, or if they do they probably rise again within shot. They do not rise very easily off the water, and their feet often come in contact with the crest of a wave just as they are rising; and in spite of all his hurry, the round, plump little fellow is fairly tripped up, and down he comes souse into the water again, head foremost.

The Black Guillemot sits on shore in an erect position, but on the floor of a room it does not seem able to walk at all; for while the Common Guillemot stumps about with great activity and ease, the other crawls about upon his stomach, pushing himself along with his legs and wings, without trying to stand up.

I may conclude by remarking that the flesh of this kind is much superior to that of the other Guillemots and Razor-bill.

(To be continued.)

NOTES ON THE INDIGENOUS PLANTS OF MELBOURNE, VICTORIA.

BY SAMUEL HANNAFORD, ESQ., JUN.

Although I am at present but very imperfectly acquainted with the Botany of Australia, yet, during my short residence in this colony, I have met with nearly one hundred and fifty plants almost in the immediate neighbourhood of Melbourne, which were new to me, and are probably unknown to many of the readers of "The Naturalist." The parts which I have explored most diligently, are the banks of the Yarra Yarra, a river which rises some considerable distance in the interior, amongst the mountains, and flows downwards through Melbourne, emptying itself into the sea at Hobson's Bay, about eight miles below the town.

It is quite cheering to persons newly arrived, to come up this pretty winding river, after the monotony and dreariness of a long sea voyage, and see on each side new forms of vegetation, with the Swallows cheeping and twittering overhead, recalling home associations; various *Libellulæ* and *Lepidoptera* of varied hues flying around, and a bright blue sky above, such as is seldom seen in England, reconciling them at once, (particularly if they be true lovers of nature,) to the new country.

The vegetation round the town consists principally of various species of *Eucalyptus*, (Gum tree,) as *E. rostrata*, (Red Gum,) *E. Saccharifiua*, (Manna tree,) which produces a sweet substance ("not a true sugar,") called Mannite; Wattles; and The Oaks, (*Casuarina.*) The leaves of some of the Eucalypti present a dotted appearance, which is caused by the presence of numerous

cells or cavities, containing essential oil, which, with the gum which exudes from their stems, considering their vast number, must render them very valuable. I am informed by my friend, Dr. Muëller, who has recently been appointed Government Botanist, that hardly any of the Eucalypti of this colony agree specifically with those of Van Diemen's Land, but are exactly similar to those of South Australia. The young branches and young cones of *Casuarina quadrivalvis*, when chewed, yield a pleasant acid, extremely useful to persons in search of water. Cattle are also extremely fond of them.* The undergrowth is composed of *Pteris esculenta*, (Tasmadian fern root,) *Hibbertia prostrata*, and other small shrubs. Speaking of this root, Mr. Backhouse says, "Pigs feed upon this root, where it has been turned up by the plough, and in sandy soils they will themselves turn up the earth in search of it. The aborigines roast it in the ashes, peel off its black skin with their teeth, and eat it with their roasted kangaroos, and in the same manner as Europeans eat bread."

The aquatics I have already found are *Potamogeton natans; P. obtusifolium*, (*Gramineum* of R. Brown;) *Myriophyllum variifolium*, (Hooker;) *Claytonia Australasica; Damasonium ovalifolium;* and a species of *Chara*. The *Claytonia*, which belongs to *N. O. Portulaceæ*, inferior in beauty to none of our water plants, is found commonly in watery places. I have observed it in the swamp at the Botanic Gardens amidst *Myriophyllum*, *Hydrocotyle*, *&c.*, and also in marshy places near the Yarra, where it is more creeping. It grows in tufts, with elongated linear, somewhat spathulate leaves, from two to four inches long, generally alternate; peduncles, flowered; petals, pure white, obovate, four times as long as the calyx. "This plant," says Hooker,† is somewhat succulent, and so delicate, that it is difficult to distinguish the exact structure of the flowers and the fruit. There can I think be no doubt of its being a true *Claytonia*, very different from any hitherto described, and, as far as I can distinguish, the first species that has been detected in Australia, or even in the southern hemisphere. The plant varies much in size, from one to six or eight inches in height, generally growing in rather dense tufts, sometimes more straggling, and then the stems are creeping. The *Damasonium*, with its large floating leaves, resembling at first sight those of a *Potamogeton*, but differing from them in the venation, I have only observed as yet on the Yarra, near the Ferry, but probably it may be found elsewhere in similar situations. Its beautiful white Nymphæa-like flowers, crimson at the base, delighted me so much on first beholding them, that I rushed into the water to secure specimens, regardless of the ducking it occasioned me.

Of the *Gramineæ* I have only observed two species, namely, *Agrostis æmula*, R. Br.,) and *Cinna ovata*, (Kunth,) (*Agrostis ovata* of Brown's Prod. p. 27,) both growing on the banks of the Yarra, the latter near Richmond, but very sparingly; and of *Filices*, in the same habitats growing side by side,

* Backhouse's "Visit to Australia," Appendix, 37.

† Icones Plantarum, vol. iii., Tab. 293.

Lomaria procera, (Sprengel,) (*Stegania* of R. Br.,) and *Aspidium proliferum*. Amongst the rocky places near the water under Richmond, occasionally, *Cheilanthus tenuifolia*, (Swartz;) *Asplenium flabellifolium;* and very abundantly in the Surrey Paddock, *Adiantum assimile*, somewhat similar in appearance to *A. Capillus Veneris*, which is preserved so carefully at home in the few localities where it flourishes.

Many of our English plants are common here, but it is probable almost all have been introduced, perhaps excepting those mentioned by Brown, ("that most illustrious of living Botanists, and the man who first opened out to science the richness and singularity of the Australian Flora,"*) in his "Prodromus Floræ Novæ Hollandiæ," 1805.

Scirpus maritimus, (Prod. p. 80.)—In swamps near the Yarra.

Oxalis corniculata, } Common about St. Kilda and Liardet's beach.
" *microphylla*, }

Melilotus officinalis, One specimen found at the end of William Street.

Urtica dioica, Common round Melbourne, but with much more lanceolate leaves than in English specimens, even of var. *β. angustifolia*.—Bab: Man: 286.

Anagallis phœnicea, (Lamarck.)—This and *A. cœrulea* are common.

Lotus corniculatus, Surrey Paddock, Richmond.

Verbena officinalis, (Prod. p. 370.)—Common in waste places.

Gnaphalium luteo-album, Banks of the Yarra, etc., abundantly. This is a very rare plant in England.—Bab: Man: 175.

Cerastium glomeratum, (Thuil.)—Banks of the Yarra.

Prunella vulgaris, (Prod. p. 363.)—Surrey Paddock.

Lythrum salicaria. Very common on the Yarra.

Arundo phragmites, (Prod. p. 39.)— Do.

Potamogeton natans, (Prod. p. 199.)—Common in swamps and the Yarra.

Alisma Plantago, (Prod. p. 198.)—Occasionally in marshy places.

It would be impossible for me to enter into any lengthened description of the plants which I have met with here, but I may briefly mention some few. On Christmas Day I explored the scrub between Melbourne and Liardet's beach, and gathered *Pelargonium Australe* and *P. erodioides*, (Hooker,) both emitting a very delicious perfume; *Wahlenbergia gracilis*, (De Cand,) common everywhere in the vicinity of Melbourne. On the banks of a Lagoon on the beach, *Epilobium ranescens; Lobelia alata*, (R. Br. Prod. 418;) *Rhagodia Billardieri*, (*N. O. Chenopodiæ*,) trailing on sandy soil near the sea, with entire linear-oblong or lanceolate leaves, pulverescent flowers in spikes, green. There is also another species common in dry places—*R. nutans*, a prostrate plant with smooth branches and lanceolate hastate acute leaves; flowers, red; *Didiscus pilosus*, (Benth,) a rare umbelliferous plant; and a *Ranunculus*, which is probably *pimpinellifolius*. About St. Kilda, and near Tent town, *Convolvulus erubescens* and *Tricoryne graminifolia*. Amongst rushes on the Lagoon, *Triglochin*

* Lecture by Edward Forbes, F. R. S., on the knowledge of Australian rocks.

decipiens, (R. Br.;) *Pimelea glauca;* and *Samolus litoralis*. On the banks of the Yarra, on the 7th. of January, I found abundantly amongst rushes *Gratiola latifolia*, (R. Br.;) *Paguerina graminea; Rumex spinulosus*, (Muëller;) *Mimulus repens;* and a very beautiful little white Violet, the centre streaked with purple, and reniform leaves, covering the banks to the water's edge; this is, I believe, the *Viola hederacea* of Labillardiere, and the *Erpetion hederaceum* of Decandolle, who has divided it from the *Violaceæ*.

One of the most delightful rambles I have had in the neighbourhood was on the 22nd. ult., on the banks of the Yarra above Melbourne. The day was bright and warm, and birds of the most varied and beautiful plumage—Kingfishers, Paroquets, etc., were flying around me. I observed by the river side *Cyperus lucidus*, (R. Br. Prod. 74;) *Chapelliera loculata*, (Muëller;) *Polygonum prostratum*, (Prod. 275,) *rare*. Under Richmond, *Cardamine remotiflora*, (Muëller,) and *Calorephalus lacteus*, (Lessing.) In the Surrey Paddock the beautiful *Rubus marrapodus*, (Wild Raspberry,) was in great abundance; on the fruit of which, and that of *Exocarpus cupressiformis*, (called here the Wild Cherry,) I literally feasted, and most grateful were they after a walk of some fifteen miles in the heat of an Australian day. Twining amongst the former was the exquisite little *Ziohya angustifolia*, (Lindley,) and near the same spot *Z. Latrobeana*, trailing; this I have also observed on Bateman's Hill, near the town. *Bursaria spinosa*, a shrub somewhat resembling our *Ligustrum*, was coming into flower, and the savoury smell of *Mentha Australis* perfumed the air on all sides. I gathered nearly opposite Gardner's Creek two specimens of a very pretty *Verbascum*; but from the variety of forms which this genus presents, I have not yet been able to determine the species. I was fortunate also to meet with a specimen of *Dipodium punctatum*, an orchideous plant which is said to be parasitic on the roots of the *Eucalypti*. In some parts of the Paddock, *Lobelia hydrophila*, (Muëller;) *Peranthera annua*, (Muëller;) *Scutellaria humilis*, (R. Br.;) *Asperula oliganthema*, (Muëller,) were plentiful; and here too I met with *Veronica labiata*, the only species I have noticed; it is about three feet in height, with white flowers in axillary racemes; leaves elongate-lanceolate, acuminate, unequally serrate. Sparingly in the same habitat, *Daucus brachiatus*, with a species of *Erechtites*. Returning by way of Richmond, a very pretty little composite, (*Strongylosperma* ———*?*) was growing abundantly on the side of a swamp, and *Ranunculus inundatus* peeping up from amidst *Potamogeton*, and other water-plants, and in wet situations *Tillœa Stuartii*, (Muëller,) very common. The ponds here are inhabited by a very beautiful species of Frog, mottled with green and brown spots, and their croaking may be heard for some distance; this and the chirping of the Locusts on the gum trees, is at times almost deafening.

I much regret my time will not permit me to enter into a full description of the plants above named, but the mere mention of them will shew how rich the colony is in Botanical productions, even at this season of the year when all vegetation is dried up by the intense heat; however I trust at some future day to renew the subject, and render it more interesting to your readers.

February, 1853.

BOTANICAL RAMBLES IN THE NEIGHBOURHOOD OF BRIGHTON.

NO. II.—FROM BRIGHTON TO PATCHAM.

BY J. E. SMITH, ESQ.

Over Churchill, and down by the Lover's Walk into the London Road, is by far the most interesting way to Preston, as we shall avoid the greater part of the town, have a fine prospect from the old church, and a view of the valley of the London Road, the most leafy district in the immediate vicinity of Brighton. Those who object to ascending the hill may proceed by the enclosures, and meet us about a quarter of a mile before we reach the turnpike. The Elder, (*Sambucus nigra,*) is one of the earliest trees to shew its green leaves, whose dark tufts, sparingly scattered over the bare branches, are but poor ornaments to the road side, where they flourish in spite of the dust and the north-east wind. The Elms, (*Ulmus campestris,*) scarcely shew any signs of green even at the tips of their branches, but the Hawthorn hedges, (*Cratœgus oxyacantha,*) are beginning to be spotted with the light green buds of leaves, and in some warm sheltered corner you will find them completely unfolded.

There is a peculiar charm in those bright patches of green that appear like oases on the dark brown hedge, here and there, as if by some freak of nature. They have always appeared to me as the most pleasing harbingers of the coming spring, bright gleams of her yet unripened beauties, an earnest of the charms she has in store. The Honeysuckle Woodbine, (*Lonicera Periclymenum,*) is a hardier shrub, and will be found everywhere in leaf clambering over the hedges in the woods.

As we have reached the London Road we can look over this wall to the left, where under the elms we shall see the shining leaves of the *Arum maculatum,* and many a Violet there

"Wastes its perfume on the desert air;"

for here the botanist may not venture without the risk of incurring the vengeance of the law against all trespassers. So we will go on through the turnpike and up the lane to the right, which will take us to the Ditchling road. The first part of this lane is pleasant and shady, with high hedges on either side, where we may find *Viola odorata,* if not already gathered; *Lamium purpureum; Leontodon taraxacum;* and the Ground Ivy, *Nepeta Glechoma,* all in flower; this last contains a great quantity of camphor in the stem and leaves. It is the presence of an essential oil containing camphor which gives that aromatic perfume, so remarkable in the whole of the natural order *Labiatœ,* to which *Nepeta* belongs; indeed the camphor is so copious in the sage and lavender, that it may be extracted from their oils with considerable advantage. There is not a single deleterious, or even suspicious plant in all this tribe, many of them containing highly valuable properties; the Ground Ivy, for instance, that

we have here, is considered useful in the preparation of tonic beverages. The leaves were used to clarify ale until the time of Henry VIII., when hops began to be substituted. An infusion of the leaves is commonly taken as tea, and is slightly tonic, expectorant, and aperient. The little protuberances, sometimes observed on the leaves, are occasioned by insects. The distinguishing feature of the order *Labiatæ* is a two-lipped corolla, as seen in the common Dead Nettle, and at the bottom of the toothed calyx are apparently four little seeds, but in reality, a deeply four-lobed ovary.

This lane leads us up to the Downs, to Hollingsbury Castle, an old Roman encampment, whence we have one of the finest views of Brighton and the sea coast; and on a clear day the Isle of Wight is distinctly visible. Instead of turning up here, however, we can continue along the London Road, where we shall find on both sides all the way to Patcham abundance of Sweet Violets, but if we would gather any of the flowers we must get up extremely early in the morning; or those who do not like early rising can take a walk at any time along the cliff at Brighton, where they will find plenty of them at a halfpenny a bunch, that are most probably natives of this road or the neighbouring woods and hedges. About the walls at the bottom of Withdean lane is the Pellitory of the wall—*Parietaria officinalis;* and in the hedges and hedge-rows the Dandelion, White Dead Nettle, (*Lamium album,*) and the Celandine, (*Ranunculus ficaria,* the earliest of the Buttercups, besides our old friend, *Viola odorata.*

Towards the top of the lane in the coppice is the Yew, (*Taxus baccata,*) in full flower. It is very dangerous to allow cattle at this season to wander near the Yew-tree, as they are fond of the young shoots, which are of so poisonous a nature that I have known them cause the death of the finest cart-horses in a few hours. Here also is the Great Round-leaved Sallow, (*Salix caprea,*) with its bright yellow catkins hanging on the leafless branches. It is commonly called *Palm,* from the ancient custom of carrying the branches of yellow blossoms in procession on Palm Sunday, at which season it is in full bloom. Withering says "The catkins are vulgarly called *'Goslings,'* from their striking resemblance in colour, and their appearance at the same time as Goslings are hatched. These catkins are the male, or stameniferous flowers; the female catkins are green, and grow on a distinct tree; both kinds are here near to each other. Bees and other insects convey the pollen from the male to the female blossom, which is thereby fructified, and afterwards produces the cottony seeds that may be seen in a month or two flying about in every direction.

The genus *Salix* belongs to the natural order *Salicineæ.* It contains, according to Hooker, thirty-seven British species; Withering reckons fifty. Among these are trees and shrubs of every size, from the lofty timber tree of sixty feet in height, to the creeping *Salix herbacea* of the Highlands and Alps, which scarcely rises above the ground.

"The many important uses," says Hooker, "rendered by the different species

of Willow, Osier, and Sallow, serve to rank them among the first in our list of economical plants." "The *Salix caprea* is the earliest of its kind; the wood is useful for hurdles, and for the handles of implements; the bark possesses considerable tanning properties, and has been employed with success instead of *Cinchona*—the Peruvian Bark. Rice Paper, as it is called, which comes from China, is made of the inner bark of a species of Willow. The Common Poplar, (*Populus fastigiata,*) belongs also to this order, but it can scarcely be called indigenous. It is much cultivated in France for building purposes; and along the banks of the Saone and Rhone it grows so rapidly that, although an inferior kind of timber, it increases in value one franc every year. Planted in double rows by the sides of canals in Belgium and France, these lofty and majestic trees give quite an oriental character to the country; and by their perpendicular lines form a pleasing contrast to the level plains in which they are situated. On crossing a bridge over one of these canals, the avenues of majestic Poplars on either hand infinitely surpass in beauty and grandeur the stupendous colonnades of Ancient Egypt; so puny are the noblest works of man compared with the sublime creations of Nature."

This long digression on Poplars and Willows has brought us to the gorse-covered Downs just below Hollingsbury Castle. Here we get an excellent idea of the general character of the South Downs. On one side we look over several undulations to the Devil's Dyke and the Dyke House, so welcome to the weary wanderer over these almost houseless regions; before us is Clayton hill and tunnel; a little to our right the border of Stanmer Park and the road to Ditchling Beacon, the highest point on the South Downs, whence is an extensive panoramic view of the Weald as far as the chalk hills beyond Reigate; in the valley below us is the quiet village of Patcham, with its neat windmill on a rising knoll, its peaceful church and church-yard, where

"The rude forefathers of the hamlet sleep."

Crossing the ploughed fields as well as we can we shall find a crooked lane that leads to the village. The air is fragrant with the perfume of Violets, and the sides of the lane are beginning to look gay with the few spring flowers that we have already observed.

We are now in the village, and here is mine hostess of the Black Horse, the *Ultima Thule* of our day's ramble, where we may pour a moderate libation of the barley juice, and make a burnt offering of that fragrant weed, *Nicotiana Tabacum,* to the gods and goddesses of the Botanical world. The ale will strengthen us for our dusty walk to Brighton; and surely if the ladies raise no objection, the Botanical student has no right to despise so interesting a weed as the "far-famed Tobacco."

April, 1853.

A DAY'S RAMBLE BY THE SEA-SHORE, IN THE BEGINNING OF MARCH, 1853, IN COMPANY WITH A FRIEND.

BY MR. T. EDWARDS.

We left Banff by daylight, with a rather hazy sky and a strong breeze from the E. N. E.: it was somewhat coldish, being frosty, but a most excellent day for our purpose, that of viewing and searching after the beautiful and all but neglected, that is in this quarter, works of creation. Towards noon the haze melted away, and the bright and glorious orb of day broke forth in all his majesty of might, and looking down with unclouded splendour, cheered us with his welcome and invigorating rays. Having passed through Whitehills,* we took the low path which leads along the beach to Portsoy. The coast here, though not possessed of those bold and towering cliffs which are to be seen along some parts of our sea-shore, is nevertheless rocky, and in many instances somewhat steep. With the exception of two, or perhaps what might be termed three, small spots, there is nothing in the shape of a sandy flat, bank, bar, or shingly beach; there were nothing but rocks and grassy braes along our whole route. Such being the nature of the locality, we perhaps did not meet with so many of our wading friends as we might have done had it been a comparatively flat and marshy coast, interspersed with mussel scalps and oozy beds of sand or muddy pools; still, however, we were not altogether disappointed even in that way. And now for our catalogue:—

Great numbers of adult and immature Gulls, dispersed in numerous parties, were riding buoyantly here and there on the bosom of the living waters, whilst not a few were enjoying a lounge, as it were, on the more desirable portion of 'terra firma.' Of these, many appeared to be busily engaged in dressing and arranging their downy plumage; a few occasionally passed overhead, bending their course inland, no doubt to follow, though not to whistle at, the plough of some friendly husbandman. Of Curlews, (*Numenius arquata,*) we observed nine; Redshanks, (*Totanus calidris,*) four; Ring Plovers, (*Charadrius hiaticula,*) five; and a pair of Oyster-catchers, (*Hæmatopus ostralegus,*) all of which, on rising from the lower-lying portion of the rocks, which at low-water are here bare in many places for some distance out, as we passed greeted us with their respective notes of recognition and alarm, uttered as a warning of approaching danger to their less watchful and less timorous brethren. Four Herons, (*Ardea cinerea,*) three of which had long and beautiful pendant plumes, were also observed and aroused from their fishing-grounds. Small groups of Long-tailed Ducks, (*Harelda glacialis,*) were likewise to be seen, and in many instances close in shore; with here and there a sprinkling of Golden-eyes, (*Clangula vulgaris;*) and a few Scaups, (*Fuligula Gesneri.*) Of Divers we counted seven, but could not distinguish the species; and of Cormorants, (*Phalacrocorax carbo,*) three. All these, that is the Divers and Cormorants, were

* A small fishing village a little over two miles west of Banff.

invariably discovered alone, seeming to delight, as it were, in the enjoyment of what some are pleased to term, though I question the fact very much, the unalloyed pleasures of single-blessedness. One Red-breasted Merganser, (*Mergus serrator*,) a most beautiful male specimen; and three Widgeons, (*Mareca penelope*,) were also observed. Of the various groups of birds, together with a few solitary individuals, which came under our observation, there were several which we could not satisfactorily identify, but considered them to be Guillemots, or Auks, or Razor-bills. The total absence, as far as we were able to ascertain, of the Rock or Purple Sandpiper, (*Tringa maritima*,) somewhat surprised us; from the rocky nature of the coast, we did indeed expect to have met with some.

An abrupt turn of the path brought us suddenly and unexpectedly within a few yards of a very fine Fulmer, (*Procellaria glacialis*,) seated on a ledge of rock, but which, on our presenting our swarthy faces, took, not to his heels, but to his wings, and made off. O woe betide the unfortunate morn that we left our homes without a gun! not even a single barrel betwixt us. What could we do then? There was a rare bird, and within easy approach, and yet nothing to procure it with. Why all that we could do was to feast our eyes, as the good old patriarch did when he beheld the melliferous land of Canaan; and this we did do, for his flight, which was performed rather sluggishly, was of short duration, as he again alighted on another rock only a short distance in our rear. The Hooded and Carrion Crows, (*Corvus cornix* and *C. corone*,) appeared rather plentiful and somewhat noisy; several Stonechats, (*Saxicola rubicola*,) of both sexes, were also seen: these were hopping amongst the drier parts of the rock, and on the heaps of sea-weed which had been cast on shore. We were ever and anon delighted as we passed along at hearing—our ears as well as our eyes being open and all attention too—the well-known "pees-weep" of the familiar and gorgeous-painted Lapwings, (*Vanellus cristatus*,) rising from the fields above—sweet harbingers of early spring; we were likewise cheered and gratified beyond expression at beholding the lively little Pipit, (*Anthus petrosus*,) prancing joyously about, now on the pathway before us, now on a stone behind, now on a grassy knoll on our left, now up heavenwards soaring, on active pinions borne, humming away its vernal song; now down like a dart to some lichen-covered rock close by, there, with tail somewhat raised and wings a little drooping, to end its humble note of praise—sure signs these that rosy summer was coming again.

At the bourn of the Boyne, which lay in our route, we encountered the watchful Water Crow or Dipper, (*Cinclus aquaticus*,) with his snow-white breast; as also several Pied and Grey Wagtails, (*Motacilla alba* and *M. boarula*.) Of the rapacious gentry, one solitary Kestrel, (*Falco tinnunculus*,) was all that we had the pleasure of meeting with. Having descended to a creek, we surprised a very large Otter, (*Lutra vulgaris*,) which, on being disturbed, and no doubt considering us rather suspicious-looking characters, and on that account none of the best company, rushed headlong into the sea, despite all our friendly endeavours to prevent him. "He's gone, he's drowned," exclaimed

my friend, as the animal sunk in the water, and we both felt somewhat sorry at the unfortunate circumstance, as we had been the sole cause of the melancholy catastrophe; in a few minutes, however, all our fears on that score entirely vanished, as we again observed our shaggy friend boldly pushing his seaward path, seemingly uninjured, and having rounded a point he speedily disappeared from our view. Of five Rabbits, (*Lepus cuniculus,*) which we noticed, one was of a jet black colour, with its *tail* and one of its *fore feet* of a pure white, which formed a rather strange contrast with its otherwise sable hue, and which appeared very conspicuous and to some advantage when the animal was running.

Observing a Weasel, (*Mustela vulgaris,*) cross our path, and perceiving something large dangling from his mouth, we gave chase. Finding himself thus so unceremoniously set upon and somewhat hotly pursued, the little creature, dropping the object, which proved to be a Black Rat, (*Mus rattus,*) and which, though quite dead, was still warm, sought for refuge and shelter amongst a cairn of stones which lay conveniently near. Here we lost sight of him for a time; we were not long, however, before we again beheld the impertinent little murderer popping his blood-stained head out at the ports of the fortress into which he had retreated, now at one, then at the other, no doubt reconnoitering the actual strength and position of his supposed enemies, and doubtless ruminating as to the probable chance of a successful issue, should a sally be made with the view of recapturing his victim. "Do you wish to procure him?" asked my friend, at the same time adding, "he's a capital specimen;" and having seized a stone large enough to have felled an Elephant, he stood ready for action. "Oh, no!" I replied, "let him alone, and I'll wager my head, an appendage which, I must confess, I should not like as yet to lose, especially for the sake of a *Futtenit,* that he comes, if we stand quiet, and takes away the Rat from beneath my feet," at the same time placing one of my feet above the dead animal, but so as not to press too hard against it. Accordingly, and just as I anticipated, the daring little fellow soon emerged from his moss-crowned castle, evidently armed with all the determined and pertinacious intrepidity for which his race are famed, and, after a few haltings and turnings, at last boldly approached, seized hold of the Rat by the side of the neck, and drew it away. Having proceeded a few paces, it was again deposited on the ground, but this time with a seeming air of triumph, and looking up to our faces, his fore feet resting on the body of his prisoner, the sullen and silent captor stood and eyed us for a few seconds with an apparent look of contemptuous defiance; this done, and having again seized hold of his booty, he dragged it away, and reaching his former asylum once more, disappeared, but this time to banquet at pleasure on the fruits of his toil.

Beside where the streamlet already alluded to falls into the sea, stands a rock, alone, whose base in front and on either side drinks deep of the ocean wave, and whose heavy and aged brow towers far above the flow of the highest tidal stream, its only approach from the land being by a rough and narrow

path. On the top of this rocky and sea-girt promontory a castle is said once to have stood, which belonged to the Ogilvies of the Boyne; there are, indeed, slight traces of a building having once existed, but so completely has Time, aided, perhaps, by the hand of violence, done the work of demolition, that scarcely a fragment remains to tell of its grandeur or its strength, or even to arrest the keen and scrutinizing eye of the antiquarian, or to draw the attention of the zealous admirer of the ruined walls of ancient times. Here, however, we were, and searching about with the view of allaying our curiosity, we accidentally stumbled on what we at first sight considered to be a white stone; but, reader, judge if you can, for we cannot describe our surprise and terror—yes, terror!—for, be it remembered, we were within the precincts of an old, very old castle, and everybody knows what fearful stories of hobgoblins, horrid and bloody deeds, and dismal tales are told of some such places;—judge, then, I again say, our surprise as we beheld the supposed stone change its form, stand up, and assume the appearance of a living being! It was in vain we rubbed and rubbed our eyes, for there it stood before us, a thing of actual life and motion—not an imaginary apparition of an over-heated and wandering fancy, nor yet an ideal phantom of a weak vision or diseased brain, but stern reality itself, with its large yellow and demon-like eyes staring us full in the face, with a look of apparent distrust, not unmingled with fear. Although I have no great dread of ghosts, not being a believer in such things, still I must say that on this occasion my heart died within me, and I felt a good deal startled and otherwise queer, as, I believe, also did my friend, at the untoward and unexpected appearance of our mysterious companion.

Our consternation having in some measure subsided, and my friend having once more found the use of his tongue, (for we had both been in a manner rendered dumb by the unlooked-for occurrence,) ejaculated in a low whisper, "Don't you move, and I'll show you some sport shortly." "For any sake do no such thing," I replied, judging his intention, and dreading the consequences. It was in vain, however, that I expostulated with him on the utter folly and danger, but above all of the calamitous circumstances which might accrue from such a procedure; I was unheeded. Flushed by the excitement of the moment, and perhaps buoyed up with the flattering hopes of a successful issue, my too sanguine neighbour had already, with outstretched arms, and before I was aware, made the assault; but as warlocks and witches have a way of their own of escaping when danger threatens, lo and behold my poor friend, instead of grasping the object of his wish, only embraced a huge portion of the hard and unfeeling rock, whilst the "snow-white spectre, as he was pleased afterwards to term it, glided swiftly and noiselessly away out amongst and through his very fingers, yes, fairly vanished away; but not in a flash of fire, the usual method practised by Water Kelpie and old Nicky Brimstone, nor yet by melting into the more liquid element above, as good spirits are said sometimes to do. How then? By vaulting with a single bound over the rugged and dangerous precipice, and plunging into the gurgling ocean beneath, in the lovely

and fascinating form of one of the gentler sex—some high-born and noble dame of the olden time, with lily bosom dyed with gore, and clad in a pale winding-sheet? Oh no! but by bounding off in the more welcome shape of a Mountain Hare, (*Lepus variabilis,*) aye, and a most beautiful specimen it was too, so much so that at least one longing heart yearned after it. But my unfortunate friend, what of him? Gaze at him rising from his flinty couch, somewhat stunned, his visage wan as death, and besmeared with blood. In his vain endeavour to capture poor *Maukins* he had lost his footing, and having stumbled, the most prominent of his facial organs had come rather suddenly and with some force against the ground, which had caused the crimson spring to flow rather profusely; beyond this, however, and a slight scar on the forehead, no material or serious damage was received, a fact which I was most glad to learn.

So much for the live objects which came in our way; and now for the dead:—Be not surprised at this, for be it known and remembered too, that the writer has a natural and ardent love for all the works of creation, dead or alive; not an acquired thirst, but an internal desire implanted in him whilst yet in embyro by the ever-gracious hand of the Almighty—the God of Nature—and thereby born with and in him. From this circumstance it will not be so much to be wondered at when it is told that it is a constant rule with him, when an opportunity offers, that he never passes a *dead animal* without first ascertaining, or endeavouring to ascertain, what it really is. Well, then, from Whitehills to near the church-yard of Portsoy, which lies close to the beach, a distance of about six miles, we counted the remains of no fewer than forty-seven animals, all cast on shore dead, besides numerous fragments of others, doubtless the most, if not all, of which had fallen victims to the late severe and long-protracted storm. Of these forty-two were birds, comprising seventeen Razor-bills, (*Alca torda;*) six Guillemots, (*Uria troile;*) two Little Auks, (*Mergulus alle;*) three Herring Gulls, (*Larus argentatus;*) four Common Gulls, (*L. canus;*) one Kittiwake, (*L. rissa;*) two Long-tailed Ducks, (*Harelda glacialis;*) two Brent Geese,* (*Anser brenta;*) one Common Wild Duck, (*Anas Boschas;*) two Golden Plovers, (*Squatarola pluvialis;*) one Red-throated Diver, (*Colymbus septentrionalis;*) and an immature specimen of the Great Northern Diver, (*C. glacialis.*) The others consisted of two Common Cod-fishes, (*Morrhua vulgaris;*) one Salmon, (*Salmo salar;*) one Lump-sucker, (*Cyclopterus lumpus;*) and one Conger Eel, (*C. vulgaris,*) of an enormous size, being nearly ten feet long, and of proportionate thickness. The most of these latter animals were very much mutilated, no doubt by the Crows, which, as I have already hinted, were pretty numerous in this quarter.

As for Conchological specimens of the common kinds, they were in rich profusion in many parts, and Star-fishes not a few, but all of one sort, viz: *Asterias rubens.* Searching amongst the various heaps of tangle washed on shore, we found several specimens of our native Polypes, or rather the corally

* Large numbers of this Goose have visited our coast this season.

remains of those minute and interesting creatures, such as the Shape Coralline, (*C. officinalis;*) the Branched Tubularia, (*T. ramosa;*) the Salicorn Cellaria, (*C. salicornia;*) the Cypress Sertularia, (*S. cupressina;*) and the Scaly Corallina, (*C. squamata.*) We also picked up several Cuttle-fish mucroes, (*Sepia officinalis,*) in pretty good condition, and well stored with "pounce;" we likewise obtained Purple Spatangus, (*S. purpureus,*) and a few Urchins, (*Echinus esculentus;*) also a beautiful funnel-shaped section of our own Sea-sponge attached to a bivalve.

Banff, April 11th., 1853.

REMARKS ON *TESTACELLA SCUTULUM*, OR SHELL-SLUG.

BY J. MC' INTOSH, ESQ.

The *Testacella scutulum* is somewhat a local, interesting, and curious mollusk. It is dissimilar from all others in its general nature and mode of life, living, as it does, mostly under ground; and, as far as we are aware, entirely upon the Common Earth-worm, (*Lumbricus terrestris.*) We have frequently observed them fix themselves in the middle of the body of a large Worm, so that its head appeared buried in the flesh of the Worm; in which case its victim will be devoured piecemeal. But it more generally seizes them at one end, and by degrees swallows them whole, which operation requires two or three days to complete; during which time that portion of the Worm which is not devoured, appears to be quite alive and strong; and if it be a large Worm, it will turn the Slug over with every twist of its body. It is astonishing with what ease this animal can force its way through the earth in quest of food; its texture is very firm, almost cartilaginous to the feel, and the mucus of the skin is extremely tenacious. They are most commonly found in dewy wet weather: the last we captured was late in November, 1852.

The stomach, when carefully examined, is very curious, and wonderfully adapted to the food it receives.—Its inner surface is covered with a number of small sharp spines, pointing backwards, so that when half of a Worm is swallowed, it is prevented by these spines from escaping, which, without this peculiar organization, would be the case.

The colour of this mollusk is yellow, more or less deep, with a white line along each side, occasionally spotted with small brownish or blackish specks, measuring about two and a half to three inches in length. On the posterior extremity of the back is a small but perfectly-formed shell, (as shown in figure.) Auriform, ovoid, or elongated; vertex, rather large, acute; aperture,

very large; pillar lip, near its upper extremity, broad, flat, and very slightly reflected at the edge; outer lip, dilated. Immediately beneath this shell is situated the orifice of the duct, which transmits air to the lungs; so that the use of the shell appears to us to be that of protecting and keeping the orifice free and open, and to prevent its being choked with earth, through which the animal is continually burrowing.

Proceeding from the head are two regular pairs of *tentacula*, but it can, at its pleasure, expand and convert the lateral parts of the mouth into a subsidiary pair, which are there situated immediately beneath the anterior, or the smaller pair, to which they are nearly equal in their length and size.

This Slug does not hybernate, as may be ascertained, when they are found on digging them up in winter; they will be observed in pursuit of their prey, and may often be seen emerging from the ground, and crawling about on the surface. In the months of May and August the eggs are to be found; they are oval, hard, and opaque, and when fresh are quite white, but afterwards assume a brownish colour. If the eggs are placed on a warm surface, or in the warm hand, they will explode with a loud noise, dispersing the contents and shell to a considerable distance. It inhabits gardens in the neighbourhood of London: it has, we believe, been found plentifully in gardens at Hammersmith, Lambeth, and in the Royal Botanic Gardens, Regent's Park, and in fields and gardens in the neighbourhood of Hampstead and Hendon. We are informed by Mr. Garroway that it is found in the Bristol Nurseries, and that he has frequently, when a boy, made many shillings of them, by collecting them and selling them to strangers. Mr. Miller, a late proprietor of these nurseries, we believe was the first to take notice of this singular creature. We have met with them frequently for the last six months in the extensive nurseries of Taunton: it has also been found in gardens in Gloucestershire. It was found many years ago in Ireland, at Youghal, by Robert Ball, Esq., of Dublin; and the late Mr. Thompson says that it has also been found in a garden at Bandon, by Mr. G. S. Allam. Of the *Testacella*, three species are described and figured by Mr. Sowerby:—*T. Maugei*, an inhabitant of Teneriffe; *T. haliotideus;* and our present subject, *T. scutulum*.

In conclusion, we shall feel obliged for any further information on this singular mollusk through the pages of "The Naturalist."

5, *Middle Street, Taunton, February* 17*th*., 1853.

Miscellaneous Notices.

Ornithology of the Leeds District.—The Geese referred to in a former paper, are the Bean Goose, (*Anser ferus*, Flem.) (*Anser segetum*, Steph.) (*Anas segetum*, Mont.) and the Wild or Grey lag Goose, (*Anas anser*, Mont.) both shot at Killingbeck. I must have omitted the Ruff, (*Machetes pugnax*,) in my list, which has been shot at Roundhay. Two fine specimens, male and female, were shot during the summer of 1851, in the marshy bottoms at Pannel, by A. Dickinson, Esq., it seems probable that they may have bred there, which of course would be something unusual.—John Dixon, June, 1853.

The Lapwing, (Vanellus cristatus.)—During the early part of last March, I was rambling about Weston Moor, near Otley, a favourite district of the Lapwings, and noticed, as I quite expected, that they were all paired, and very clamorous at being disturbed. Towards the latter end of the same month, I was at Malham, and felt rather surprised to find these birds in that district still frequenting the swampy ground *in large flocks:* I am almost at a loss to account for this singularity, both localities seeming to possess the same advantages. It must not be understood that the Lapwing frequents the mountainous district above Malham, but seems to prefer the low ground, through which some little stream meanders, where the vegetation is luxuriant, and food most abundant. All naturalists agree that they generally forsake the high moorlands on the approach of winter, and retire towards the coast, or some fenny district; yet at the same time that large flocks may be found near the sea, or frequenting the mouths of such rivers as the Humber, it often happens that a few stragglers will casually visit us inland, in the depth of winter, probably on their passage between the two coasts. In the months of December and January 1849, large flocks were seen in the neighbourhood of Knaresborough, frequenting the fallow land for a few days, and then pursuing their course in an easterly direction. They seem to be very docile, particularly when caught young; I have often seen them quite domesticated, and kept in gardens, when they seem to be of infinite service, in gobbling up worms, etc. I remember hearing of a young lady, who kept a pet Lapwing for some time, which contracted a curious friendship towards a little terrier dog: they were both brought up much together, and at first the poor bird had a sad time of it, its canine companion not being one of the most gentle playmates; however it safely escaped all the teasing and worrying parts incidental to juvenile doghood, and doubtless both advanced in wisdom as they advanced in years. The Lapwing's favourite locality was the kitchen garden, and whenever the dog chanced to pass that way, he was sure to be joined by his feathered friend, who closely accompanied him throughout his rambles amongst the cabbages and cauliflowers; the only drawback to this intimacy was when the dog unluckily brought a bone into the garden to pick, when the friendly bird had the sagacity to keep at a respectful distance. This curious friendship lasted until the poor bird, one unlucky day, fell a cruel sacrifice to some prowling half-starved cat.—Idem.

The Hobby, (Falco subbuteo.)—At the end of last April, a fine specimen of an adult male was shot at Dickleborough, in Norfolk, and is now in my possession.—E. E. Stride, Highbury Park, Islington, near London, Juno 9th., 1853.

The Hawfinch, (Coccothraustes vulgaris.)—A nest of this scarce bird was taken on the 19th. ultimo, in a Hornbeam tree, in Epping Forest, not very far from the town of that name. It was shallow, and loosely constructed of dry grass, containing five eggs, two of which are in my collection.—Idem.

The Wheatear, (Saxicola œnanthe.)—This bird is by no means uncommon in this neighbourhood, notwithstanding its proximity to London—being only three miles in a direct line from the Royal Exchange, but, considering the distance, very open. Since I have taken up the pursuit of Ornithology as an amusement, I have been much surprised and gratified to find that so many varieties of birds are in the habit of visiting this place, and specimens of the rarer kinds by no means unfrequently occur. I am in hopes of ascertaining that the Wheatear breeds in this place, which it probably would, if left undisturbed by the numerous visitors to the surrounding fields.—Idem.

The other day, May 4th., about six a. m., I saw a pair of Terns, *(Sterna Hirundo,)* fishing up and down the River Soar, close to where I live. So keen were their appetites, and so intent upon their prey, that they often flew within gunshot. They were in friendly company with scores of their Liliputian brethren, such as Sand Martins, House Martins, and Swallows. It was quite a treat to an "inland" ornithologist to see with what ease and grace they flew, and how beautifully they glided over the surface of the water. I recollect some four or five years ago seeing a pair in the same locality.—William Bond, Frog Island, Leicester, May 23rd., 1853.

Note on the Puffin, (Fratercula arctica,) *and Razor Bill*, (Alca torda.)—Singular as it may appear at this season, the beach at Morfa, Bychaw, and Harlech has lately been strewed with dead Puffins and Razor-bills. A question here arises for the ornithologist, as to whether these

birds are migratory or not, or is this the result of the very severe westerly gales we have experienced during the last winter.—From the North Wales Chronicle. R. W. Cradock, Hackney, March 15th., 1853.

Honey Buzzard, (Pernis apivorus.)—I have lately seen a fine adult specimen preserved, which was taken in a pigeon-trap at York-street, Westminster, about three years ago.—M. C. Cooke, Lambeth, April 8th., 1853.

Ring Ouzel, (Turdus torquatus.)—A nest containing five eggs was taken by Mr. Downing, at Addiscombe, in Kent, as he informs me, last year. He saw the bird fly off the nest: I have one of the eggs in my possession.—Idem.

Common Guillemot, (Uria troille.)—On the 28th. of March last, I received a specimen of this bird in the flesh, which had been shot at Smallburgh in Norfolk, a day or two before, at a distance of about six miles from the sea.—Idem.

Red-breasted Merganser, (Mergus serrator.)—I have one in my collection which was shot by Robert Whaites, Esq., at Ingham, in Norfolk, a few years since. Also a Little Auk, (*Mergulus alle*,) shot by the same gentleman, in the same locality, and about the same time.—Idem.

Nesting of the Sparrow, (Passer domesticus.)—In "The Naturalist" for February 1853, one of its correspondents, J. D. repeats his assurance that the *P domesticus* builds in trees, page 36, vol. 3, a circumstance which had been questioned. I wish to confirm his assertion. He says "it is not at all a rare circumstance for this bird to build in trees near houses," nor is it, for I remember a time when Shenfield Common, in Essex, was covered with several old trees, fast decaying, aspen and ash: a very few of the latter remain by the side of a pathway, leading from the adjacent town to this Common. I have known and seen very many nests of the *P. domesticus* taken from the boughs and hollows of these trees. I have taken their nests also from fir boughs and elms, in my present neighbourhood, Bawburgh Hill, and one from a pear tree. Shirley Hibberd in an article on the Sparrow says "when he builds in a tree, which is very seldom, though Professor Rennie says to the contrary, he usually constructs a domed nest, that is a large globular frame-work of straw and feathers, with a hole in the side for ingress and egress, so that a good shelter is afforded by the circular roof and walls." This may be a very correct description, but such as have fallen under my own personal observation have been externally large, ill-shaped, circular bodied of small roots and dry grass or hay; internally, nicely rounded with feathers in a vast quantity, wool, stray bits of cotton, and even pieces of rag and cloth. The entrance has been that of most nests at the top, and a regular open surface (no circular roof) fringed by the outer feathers of the lining, that in some instances may have arched or curved over, but scarcely formed a roof.—G. R. Twinn, Bawburgh Hill, near Norwich, March 26th., 1853.

The Brambling, (Fringilla Montifringilla,) has been a constant visitor here, in large flocks, from January 31st.—Idem.

The Hobby, (Falco subbuteo.)—Fond of a warm region, this bird is found by Naturalists in many parts of Europe and Asia, and Mr. Meyer conjectures even in Africa. The early part of April is the usual period of its arrival in this country, but our season from November to the early part of February having been unusually mild and congenial, I apprehend it was a very premature visitant to our country. I am led to give these few notes on the bird, from its having been in our neighbourhood on March 7th., 1853. During the whole day the Hobby is an indefatigable hunter, particularly when his haunt is a close wood of thick growth, skirted by a fine open heath. I remember to have seen one of these searchers chase a lark, on a spot called the Moors, near Bentley Mill, Kelvedon Common, Essex, and after long parrying from both birds, at one time soaring high, at another rapidly falling, the poor hard-pressed bird, with a lightening dart rushed aloft however, and escaped its pursuer. Meyer says "The Hobby chooses for its prey Larks, Swallows, and Martins, which he pursues in the air, following them easily in all their rapid evolutions, and strikes with such unerring aim, that he seldom fails to secure his selected prey; even the Swift cannot escape him." On March 7th., an

agricultural gentleman was conversing with his servant at the Hall door, which was wide open, when one of his tame pigeons rapidly flew past him, brushing his face with its wing, and took refuge in the Hall where it dropped overcome with dread, its enemy, a fine male Hobby, was seen by the gentleman careering upwards, doubtless very chagrined. He saw it near his home on the following day, but not since; the late snows may have driven it away. It is a fine bird when of adult age, very fierce, and generally extremely scarce, and but seldom seen in the county of Norfolk, and never I think at so early a date as March 7th.—Idem.

Pugnacity of the House Sparrow, (Passer domesticus.)—Whilst rambling a few months ago in search of specimens for my cabinet in the neighbourhood of Dunham Park, the seat of the Earl of Stamford and Warrington, my attention was arrested by an unusual uproar amongst a number of Sparrows that were congregated in a fir tree near to where I stood. I listened for a while, but as the noise increased I was induced to get under the tree as quietly as possible, so as not to disturb the belligerants. When under the tree I soon found that war was declared, and that a fight was then being carried on, which I felt an inclination to witness. I had not stood under the tree above two minutes when one of the belligerants fell at my feet quite dead, having received a wound on the head, from which blood was issuing. I watched again, and still the fight went on until another bird dropped from the tree, not quite dead, but mortally wounded, only living in my hand a very few seconds. Still the fight was not over, and I determined, if possible, to see it out, and therefore waited a little longer. After some minutes hard fighting another bird flew out of the tree, but dropped to the ground within a very few yards from me. I ran after and gathered it up, but it was so wounded as only to live about half an hour. How long this "tremendous fight" would have continued I cannot tell, for the confusion amongst the fighters was as great as at first, but when I ran to pick up the last bird I made a noise, which disturbed the belligerants, and caused them to take to flight. I had three *male* Sparrows, all killed in this remarkable battle, left in my possession as a memento of the occurrence.—John Balshaw, Post Office, Altringham, April 20th., 1853.

House Pigeon.—Having observed this bird referred to in "The Naturalist," for the current month, by Mr. Henry Ferris, I beg to forward the following in corroboration of his statement:—My father, Mr. Thomas Balshaw, has been a Pigeon-fancier for many years, and has more than once been in possession of birds that have laid three eggs at a nesting, but in no instance have all the eggs been fruitful. He has now, however, a pair of birds which have not only laid but actually hatched three eggs: the young ones seem very healthy, and are about a week old. This is certainly an exception to the general rule.—Idem.

The House Sparrow, (Passer domesticus.)—I have several times recently, up to the present date, observed considerable numbers of Sparrows in the low hedges of the fields about here, almost small flocks. They are not building, and I do not remember ever to have seen them in this way at this season of the year before.—F. O. Morris, Nafferton Vicarage, Driffield, May 25th., 1853.

Additional Heronries.—Perhaps the following extract from the "North British Review," for May, 1853, may interest Mr. M'Intosh. "As an example of the less usual kind of Heronry where the 'munition of rocks' is selected as a place of safety, we may mention the ivy-mantled front of one of those *ghauts* called the Sutors of Cromarty.....As respects their lowlier sites, we may state that there is an island in a small lake on the southern borders of Sutherland, between the Aikel and the inn at Altnagaleanach, where Herons breed upon the ground; and in the island of Islay, about three miles from Ardimersy cottage, there is a well-known colony of these birds also breeding on the ground." In the "History of British Birds," by the late Dr. Macgillivray, mention is made of one "at Inglesmaldie, in the south corner of the parish of Fettercairn," Kincardineshire; and a few Herons breed in the woods of Feteresso, in the same county.—J. Longmuir, Jun., Aberdeen, May 23rd., 1853.

Do the Hawk tribe Drink?—In answer to this question, a short passage may be quoted from the "American Ornithological Biography" of the celebrated Audubon, in reference to the Great-footed Hawk, which is the Peregrine-Falcon (*Falco Peregrinus*) of British authors:—"Many persons believe that this Hawk, and some others, never drink any other fluid than the blood of their victims; but this is an error. I have seen them alight on sand-bars, walk to the edge

of them, immerse their bills nearly up to the eyes in the water, and drink in a continued manner, as Pigeons are known to do." Vol. i. page 89.—Idem.

Curious Hen's Egg.—I had given me by a friend last week a Hen's egg, or rather eggs, of an extraordinary formation;—they are joined together at the small ends by a tube of about three-eights of an inch or more in length, by rather more than a quarter of an inch diameter, through which the contents of one egg passed when an opening was made in the other for the purpose of cleaning it. The eggs were perfect, with the exception of the external covering of lime, which was altogether wanting. The annexed drawing will give a better idea of the eggs than any description I could write.—Stephen Clogg, Looe, May 2nd., 1853.

Capture of Insects.—Mr. King, of this town, is a practical entomologist, and a person whom I much respect from his industry and indefatigable zeal in pursuit of the objects of that science, and he is one who is in every respect worthy of the greatest encouragement. At his request I have made the accompanying little diagram and description of an ingenious box which he is accustomed to use in capturing moths by night. Small portions of the trunks of several trees are covered with a mixture of brown sugar and beer, and when the nights are warm and dark these trees are successfully visited, and the insects secured by the aid of a lantern. The little apparatus herein described will be found extremely efficacious in securing the night-flying moths, and should be in the hands of every practical entomologist. I have much pleasure in thus contributing to the efforts of Mr. King, who is desirous to forward the pursuit of a science for which he is truly partial.—W. B. Clarke, 14, Berners Street, Ipswich, Suffolk, June 8th., 1853. Communicated by the Rev. F. O. Morris.

A, Tin box or cylinder, three inches and a half high, and two inches and a half in diameter.

B, A circular piece of tin, moveable in its own plane by the hinge or rivet C, so as to close the bottom of the box.

D, A tin hoop to slip over the upper part of the box to secure a piece of gauze.

E, A second tin box or cylinder, capable of being easily slid into the box A, having a piece of cork filled into the end at F, and a string at G, to facilitate the withdrawal of one box from the other.

To receive a moth, open the bottom or slide, as at B, and place the box A over the insect, then carefully turn the slide B under the box, and the moth is enclosed, and generally ascends to the gauze at the upper extremity, which should be directed to the lantern.

The corked end of the second tin is then presented to the lower end of the box A, and the slide carefully withdrawn, and the former introduced into the latter: the moth will thus be confined between the cork and the gauze, when the moth is at once killed by pressure.

The Rosy Feather Star, (Comatula rosacea.)—A splendid specimen of this rare star-fish has just been captured here by me.—D. Ferguson, Redcar, July 9th., 1853.

The Large Weever, (Trachinus draco.)—This fish, which is rare in the north, has just been taken at Redcar.—Idem.

PECULIARITY IN THE FEMUR OF A FOX.

BY J. B. DAVIES, ESQ.

On Sunday, the 13th. March last, some men, who might certainly have been better employed, succeeded in capturing one of these much-persecuted animals, a Fox, having first fractured its left femur. In this state he was confined in a stable, where the *fancy* young gentlemen of Ripon enjoyed the barbarous sport of *drawing*, by means of Terriers and other Dogs almost as cruel as themselves, until, on the Sunday following, mortification put an end to his sufferings: in the course of the next day he fell into my hands. On dissection, I found a peculiarity in the formation of the globular head of the right femur and cotyloid cavity; and judging from my own observation that such a malformation is not often observed, I presume to offer it to the readers of "The Naturalist."

It is a fact known to every tyro in anatomy that the upper end of the

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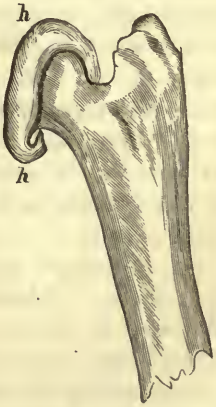
femur, or thigh bone, is provided with a globular head, which fits into a cup-shaped cavity known as the acetabulum, or cotyloid cavity. This is shown in Figs. 1 and 2, which represent respectively portions of the left femur and left side of the pelvis. The anomaly I would call attention to consists of an enlargement of the globular head of the femur, Fig. 3, which had assumed an oblong form, somewhat resembling a French bean in shape, and greatly increased in size. Of course it is impossible that the cotyloid cavity should contain such a mass, and we find that, together with its elevated margin, it has become all but obliterated, and instead of it, a flattened surface is presented to the femur, Fig. 4. It is certain that with a limb so constituted the poor creature could not have the same certainty of action as with the properly-formed joint, and this may in some measure account for the strange capture of one of the swiftest of the race—a Greyhound Fox. I do



3.

not know if such malformations are of frequent occurrence, but never having

4.

noticed it in any other animal which has fallen into my hands, I venture to publish it.

Description of Cuts.—Fig. 1 represents the ordinary form of the upper end of the *femur*. Fig. 2 the *acetabulum*, or *cotyloid cavity*, in which the globular head rests. Fig. 3. is the anomalous appearance of the *femur*, with enlarged head, *h*, *h*. Fig. 4, right side of *pelvis*, with *c* the partially obliterated *cotyloid cavity*, and *e*, *e* the plane on which the head of the *femur* moves.

Ripon, April 11th., 1853.

LETTERS OF AN ORNITHOLOGIST.

(Continued from Page 44.)

LETTER V.

Iona, April 14th., 1852.

Last Saturday, (the 10th.,) being a very fine day, I and a young friend paid a visit to Soay to see what the feathered world was about. We did not meet with much life on our way; the winter birds have mostly left, and the summer ones have not yet arrived in sufficient numbers to supply the vacancy; besides which the fine weather keeps them out at sea. We saw a string of Shearwaters, (*Puffinus Anglorum*,) flying in a flock of about a dozen; this is their first appearance this year. We also saw a few Solan Geese, (*Sula alba*,) diving and plunging; their appearance here is a sign that they are on their way to their breeding-stations. We were disappointed in our hope of finding Geese on the island, though they seemed to have been very numerous there recently.

On exploring a cavern, from which we procured several broods of young Rock Doves, (*Columba livia*,) last year, we found, as we expected, a nest. The cave is of very great depth, but so narrow as scarcely to allow a person to reach the inner extremity. There we found the nest, made upon the ground, among the shingle, exteriorly formed of dry sea-weed, and inside lined with sea-pink. It contained a pair of fresh eggs; there was a third

laying outside the nest, which the birds seemed to have eaten: it was empty with only one small hole broken in it, so we took possession of the three eggs in your name.

While returning, we met with several Black Guillemots, (*Uria grylle.*) I took a couple, and found them to have completely assumed their summer plumage, though it has not yet acquired the brilliancy it possesses in the breeding-season. I was about to shoot another, which had rather a peculiar appearance; his body being quite black as in summer, while his head and neck retained a great deal of the gray; but there happened to be a pair of Eider Ducks, (*Somateria mollissima,*) at a short distance, and though we could not get within shot of them, yet I did not wish to disturb them, as I hope they may make their nest upon Soay, or one of the surrounding rocks.

As we were rowing along under the cliffs at the southern extremity of Iona, we saw a curious-looking bird ahead, which, on nearing, we recognized to be a Long-tailed Duck, (*Harelda glacialis.*) He was evidently a straggler, and very tame, allowing the boat to come almost within shot of him before taking wing. I happened to have a cartridge in the gun, which I sent after him, and happily bowled him over. It is an adult male, acquiring his summer plumage, which gives him a curious mottled appearance. I have kept his skin in the same manner as the last, and it will be interesting to compare it with the full winter dress. The black spot on the neck is expanding and spreading over the whole neck and breast, till it meets at the black portion of the body. The white shoulder patch and long scapulars have disappeared, and are replaced by shorter red and black feathers. The only part which is imperfect is the tail; the long feathers have been cast, and the summer tail has not yet replaced them.

Of course it was too early to look for Petrels yet; so this was the whole produce of our voyage, unless I add the lid of some poor sailor's chest, which we picked up as it was drifting in from the ocean. It bore an almost illegible name, Peter B——, much overgrown with barnacles; but there were marks, slightly burnt, as if from a pipe having been frequently knocked out on them, which I much fear was finally extinguished in the salt-water waves, along with its owner.

The Choughs have been for some days back busily engaged carrying wool into their cave, and the last time I passed near them the pair attacked me furiously, alighting within twenty yards, scolding with all their might; their wings half-expanded, quivering with wrathful emotion, their bills wide open, and their heads lowered near the ground, as they threw out their shrill ear-piercing screams.

LETTER VI.

Iona, May 1852.

I SEND you with this a small box, containing a pair of Red-legged Crows, one skinned, and the other simply embowelled, and embalmed in the style of

an Egyptian mummy. I got this pair three days ago; they are remarkably small specimens, and I do not think they were nestling, as I watched them for several days; however they are male and female.

My own particular friends, as I mentioned in my last letter, had completed their labours of nidification, and I supposed that they would immediately commence laying and hatching; but I was much concerned to see them very rarely near their nest, and I picked up some wool, (apparently the lining of the nest,) upon the floor of the cave. Determined to examine it, I contrived to hoist myself up to the spot, with the assistance of a boat's anchor and cable. The nest, beautifully woven of heather sprigs, was unlined and empty; I cannot account for this misfortune; however the old birds still haunt the vicinity of the cave, and furiously resent any intrusion near it; and possibly they may make another attempt at nestling this year.

I also send you a nest of Hooded Crow's eggs; these were replaced by a pair of Bantam's eggs daubed with indigo, only one Crow's egg being left. In due time the little Hoody made his appearance, and two days after the young Bantams saw the light. The old Crow nursed the two little chickens with the same tenderness that she showed towards her own little savage imp; there they were like Romulus and Remus in the bosom of their rugged foster-mother. We carried them away, however, from the ogre's castle, fearing that they might some day remark "What a great beak you have got grandmamma!"

I shall conclude with a few notes of the month:—

May 1st. Considerable flocks of Whimbrels arrived. I killed three couple with great ease, and found them in very good condition, which may be taken as a proof that their last stage was not a very long or harassing one. These birds continue very numerous during the whole of May, but as soon as June commences, they disappear as suddenly as they arrived. Iona is not one of their halting-places on their return south, for we are not visited by them in autumn, except by an occasional straggler.

May 12th. The Terns and Cornerakes arrived. Their appearance is so precisely punctual to the day, that I would as soon date by it as I would by the almanac. The Herring Gull, (*Larus argentatus*,) is, with us, far more common than the Lesser Black-backed Gull, (*L. fuscus*,) except at this time of the year, when great numbers of the latter are seen in all the newly-sown fields, busily eating the corn among flocks of wild Pigeons and trespassing poultry. They are, at such times, extremely wary, and indeed at all times they appear to be much more so than the Gray Gulls.

I shall now drop anchor, as I have been out all night in an open boat—a two-masted skiff, with three reefs in the mainsail, battling against a heavy sea, and head wind blowing very hard; and I landed at five in the morning, well drenched with rain and spray.

(To be continued.)

ON THE NIDIFICATION OF THE COMMON STICKLEBACK, (*GASTEROSTEUS ACULEATUS,*) IN A VERY CONFINED SPACE OF WATER.

BY MR. CLEMENT JACKSON.

Having perused Mr. Warrington's account of the habits of the Stickleback in confinement, detailed in the pages of the "Zoologist," with much interest, I thought the following notice of a successful attempt to breed them in a very confined space of water might prove acceptable to many readers of "The Naturalist," and, perhaps, induce some to turn their attention to this very interesting branch of Natural History, so easily accessible to all since it is ascertained that the introduction of plants and mollusks will keep the water clear, and do away with the trouble and disturbance of frequent change; as well as affording an opportunity of studying their curious habits and economy.

On the 12th. of April, a Fish glass, of seven inches diameter and depth, was furnished with some gravelly mud, and filled nearly to the top with spring water. A plant of Water Starwort, (*Callitriche verna,*) was fixed by placing a couple of spar-stones on the roots to steady it, whilst the leaves floated on the surface, and a number of Water Snails, (*Limnea stagnalis,*) and *Ancylus fluviatilis,*) added to devour decayed leaves, etc., and keep the water clear.

The muddy particles having subsided, and left the water very clear, half-a-dozen Sticklebacks were introduced about the 18th., and a male immediately took possession, attacking and driving the others sharply about. These were taken out successively as attacked, until only one, a large female, to which he did not exhibit much animosity, remained; and in the course of an hour or two afterwards I saw him carrying a long fibre in his mouth, and actively commence building with such scanty materials as the place afforded. Having liberally supplied him with skeleton leaves, fibrous roots, etc., he took them readily as soon as dropped into the water, seizing a fibre, blowing it out of his mouth, and attentively watch its fall to test its gravity and fitness for his work; if heavy enough it was immediately recovered, and added to the building against the stone at the bottom; if too light it was rejected, and another tried, every now and then adding a stone to secure the frail fabric, and occasionally blowing a mouthful of gravelly mud over it, boring vigorously into the accumulating mass with his head to form the nest, and keep the opening clear.

This first nest did not prove satisfactory, for a few days afterwards he commenced an active removal, carrying all his materials to the other side of the stone, where he soon completed a new one, apparently to the satisfaction of both, as he brought down the female (who had nothing to do with the work, but had remained quietly at the surface, resting amongst the branches,) apparently to shew that the structure was complete, and ready for use.

She spawned on the 24th., then lay listlessly at the bottom amongst the roots, and in a few days died, either from injuries in capture, or from being worried by her pugnacious partner, whom I latterly observed driving her smartly about.

Having now undisputed possession of the glass, he mounted guard, hovering above the nest, and often drew his body slowly over and in contact with it; every now and then, at short intervals, placing himself directly in a line with the hole, he rapidly vibrated the fins and tail, apparently to pass a current of water through it; and should an unfortunate Snail at any time trespass upon it, he immediately pounced upon and threw it aside. He merely quitted his post to feed, eagerly taking small portions of earthworms from the finger, and when satisfied, blowing the last portion from his mouth and catching it again as if in play; but any thing applied to the outside of the glass raised his choler and spines in a moment.

Commiserating his solitary condition, I one day put in three more by way of company, but he had no idea of such intrusion, and having a home to defend, shewed a most determined spirit; presently making the late quiet little pond in a complete turmoil; rushing immediately on these unfortunate intruders on his domain, he chased them rapidly round the glass, biting fiercely at their tails, and, despite all their endeavours to hide amongst the plant, or in the mud, etc., at the bottom, they were speedily turned out, worried rapidly and repeatedly round, and would doubtless have been killed if I had not quickly removed them with a silver tablespoon, which was also viciously attacked by this irritated and determined defender of his invaded rights. On placing the bottle with the removed fish against the glass, he immediately rushed at them, and I observed his formidable lateral spines repeatedly projected. Of course after this exhibition of his pugnacity, he was left to manage things his own way, and continued assiduously to attend the nest, frequently and rapidly vibrating before it; and on the 16th. of May the young fry were first observed swimming thickly about the nest, so small and transparent as easily to be overlooked. For the first few days he guarded them jealously, driving back stragglers to the nest, and occasionally seizing one, perhaps more obstreperous than his fellows, in his mouth, he took it back, and blew it out amongst the others; every now and then swimming around the glass as if to ascertain that all was safe. The young, about fifty in number, gradually ascended, and in a few days scattered about at the surface and amongst the plant without interference.

On the 20th. of May the water, which had not been meddled with, except to fill up the loss caused by evaporation, and had remained quite clear, became all at once so clouded, and with a greasy scum on the surface, that the fish were barely discernible; and fearing I should lose them, about a quart was dipped out, and refilled with fresh. The cause I could not ascertain, possibly some discharge from the old fish, and from the number of young being too great for the confined space. The plant has grown freely, and

being confined to one side by the stone, forms a good canopy over the fish; but its leaves are very much eaten by the mollusks, which swim freely about at the surface, shell downwards, with the foot hollowed, and guided by an undulating motion of its edges, exhibiting a very curious specimen of locomotion. They crawl along the under surface of the floating leaves, and are so nearly balanced in the water, that I have observed one turning back on the end of a long slender fibre, which scarcely bent under its weight; and at the bottom and sides they crawl about like the Common Snail. The *Ancylus Fluviatilis*, also shifts its position freely, adhering indifferently either to the glass sides, or to the stones at the bottom. They deposit masses of spawn attached to the leaves, which are probably devoured by the fish soon after being hatched, as comparatively very few young Snails are observed; and I have often seen the old fish take some minute object from the leaves, and from the mud at the bottom.

East Looe, May 26th., 1853.

BRITISH EVERGREENS.—No. I.

BY J. MC'INTOSH, ESQ.

Ilex, (*The Holly,*) Tetrandria Tetragynia.

"O Reader! hast thou ever stood to see
The Holly-tree?" SOUTHEY.

Ilex Aquifolium.—As an ornamental evergreen, whether looked upon in the form of a tree, or as a shrub, the Holly is one of the most beautiful we possess, and few trees have proved more fertile of poetical allusions than this deserving favourite. The name 'Holly' seems to be a corruption of the word 'Holy.' Turner, in his "Herbal," calls it Holy, and Holy Tree, no doubt from its being used to commemorate the holy time of Christmas, not only in churches, but in our dwelling-houses. The German, Danish, and Swedish names of the Holly, namely, Christdorn, Christorn, and Christtorn, seem to us to justify this conjecture. The custom of placing evergreens in places of religious worship is of very ancient date, as we find from Scripture that it was in use before the introduction of christianity.—See chapters xl, xli, li, and lv, of the Prophet Isaiah; and in chapter viii of the Book of Nehemiah we thus read, "Go forth unto the mount, and fetch olive branches, and pine branches, and myrtle branches, and branches of thick trees, to make booths. So the people went forth and brought them, and made themselves booths, every one upon the roof of his house, and in their courts, and in the courts of the house of God."

The use made of Holly at Christmas is well known throughout Europe and America, but the origin of the practice is very uncertain. (Is there any reader of "The Naturalist" who would kindly furnish any information he may possess on this subject?) It was made use of by the early Christians at

Rome, for we find it was customary among the ancient Romans to send boughs of Holly during the Saturnalia, as an emblem of good wishes, with the gifts they presented to their friends. Bourne cites an edict of the counsel of Bracara, canon 73, forbidding Christians to begin to decorate their houses at Christmas with green boughs at the same time as the Pagans—the Saturnalia commencing about a week before Christmas. (See Antiq: of the Con: People, by Bourne, p. 173.) Again we find Dr. Chandler, in his "Travels in Greece, supposing this ancient custom derived from the Druids, who, he informs us, decorated their dwelling-places with evergreens, "That the sylvan spirit might repair to them, and remain unnipped with frosts and cold winds, until a milder season had renewed the foliage of their darling abodes." The earliest record of this custom in England is in a carol in the praise of the Holly, in the reign of Henry VI., and preserved in the Harleian MS., No. 5396.—

"Nay, Ivy, nay, it shall not be, I wys;
Let Holy hafe the maystry, as the maner ys;
Holly *stond in the halle*, fayre to behold
Ivy *stood without the dore;* she'ys full sore a cold.

Holy and hys mery men they dawnsyn and they syng,
Ivy and hur Maydenys they wepyn and they wryng,
Ivy hath a lybe, she laghtit with the cold,
So mot they all hafe that wyth Ivy hold.

Holy hath berys as red as any Rose,
They foster the hunters, kepe him from the doo.
Ivy hath berys as black as any slo,
Then com the oule, and ete hym as she goo.

Holy hath byrdys, a ful fayre flok—
The Nyghtyngale, the Poppyngy, the gayntyl Lavyrok.
Good Ivy! what byrdys ast thou!
Non but the Howlet that 'How! How!'"

Stowe, in his "Survey of London," published in 1598, says in his time every man's house, the churches, the corners of streets, conduits, and market-crosses were decorated with Holme, (Holly,) Ivy, and Bayes at Christmas. In the language of flowers, the Holly signifies foresight. The Holly is indigenous to the greater portion of the middle and south of Europe, in woods and shady places. The European species does not appear to be a native of either North America or India; but the *Ilex opaca*, which is very extensively distributed in North America, and the *Ilex dipyrena*, which is common in the Himalaya, closely resemble *Ilex Aquifolium*. Pallas informs us that the Common Holly scarcely occurs within the ancient limits of the Russian empire; though frequent on the southern side of Caucasus, where it forms a low branching shrub about ten feet high. In France it is abundant, particularly in Britany. In Germany it abounds in many forests, where it attains the height of twenty feet and upwards; in more exposed places only six or eight feet. It attains a greater height in England than in any other country. It abounds more or less all over the country; yet no where so plentiful as

in Needwood forest, in Staffordshire. Evelyn says, "It grows spontaneously in this part of Surrey, that the large vale near my dwelling was anciently called Holmesdale, famous for the fight of the Danes. It had once a fort called Holmes-Dale Castle. I know not whether it might not be that of Rygate."—See p. p. 270-71. In Northumberland Hollies are numerous, and of a considerable height. At Detchant, near Belford, in a large natural wood, the Hollies are of a very considerable size; many of them have been cut down as timber, and sold to herring curers. The finest Hollies in England are those at Claremont, in Surrey, where they attain the height of eighty or ninety feet in the pleasure grounds. Bradley, in 1726, mentions Hollies above sixty feet in the Holly-walk near Frencham, in Surrey, in sandy soil. There are also large Hollies in Buckinghamshire and Kent, also in Dorset and Somersetshire.

In Scotland it is common to most natural woods, where it assumes the form and reaches the dimensions of a tree of the second rank; such as many of the trees mentioned by Sir T. D. Lauder in the Forest of Tarnawa, in Aberdeenshire, so that the Castle of Tarnawa was supplied with no other fuel than billets of Holly. And Mr. Sang, (Plant. Kal. p. 15,) takes notice of the fine Hollies in the pine forest of Blackhall, on the River Dee, about twenty miles from Aberdeen. In Ireland the Holly is not very common, yet we have met with some fine specimens of the *Ilex A. variegatum;* yet they abound and attain a large size at the Lakes of Killarney.

Pliny tells us that Tiburtus built the city of Tibur near three Holly trees, over which he had observed the flight of birds that pointed out the spot whereon the gods had fixed for its erection, and that these trees were standing in his own time, and must, therefore, be upwards of twelve hundred years old. He also tells us there was a Holly tree, then growing near the Vatican, in Rome, on which was fixed a plate of brass, with an inscription engraven in Tuscan letters, that this tree was older than Rome itself.—(Book xvi, chap. xliv.) Coles, in his "Paradise of Plants," tells us that he knew of a tree of Holly growing in an orchard; the owner cut it down, and caused it to be sawn into boards, and made a coffin for himself and his wife also out of the same.

The wood of the Holly is almost as white as ivory, except in very old trunks, when it assumes a brownish tinge towards the centre, with a fine grain, and very hard, and is readily polished. It is used in the handles of metal teapots, in joinery, cabinet-making, turning, engineering, mathematical-instrument making, for wood engraving, and a variety of other useful purposes too numerous to mention here. The bark affords the well-known bird lime, which we import from Italy and Turkey; though we believe a small quantity is made in Westmorland and Cumberland. The bark is also used medicinally; the berries are purgative, and four or five of them will occasion violent vomiting. The Holly should be planted in every shrubbery and plantation, for the beauty of its shining evergreen leaves, and its scarlet berries in the

autumn, as also for the shelter it affords during the winter; and where effect is required, the variegated varieties should be intermixed with the common. The Holly makes a most beautiful and durable hedge as a fence. Well might the celebrated Evelyn exclaim, "Is there under heaven a more glorious and refreshing object of the kind than an impregnable hedge of about four hundred feet in length, nine feet high, and five in diameter, which I can show in my now ruined gardens at Say's Court?" (thanks to the Czar of Muscovy.) The Czar, Peter the Great, is said to have resided at Mr. Evelyn's house, in order to be near the dock-yard, at Deptford, during his stay in England, and it is said took great delight in the very elegant amusement of being wheeled in a barrow through the thick holly hedges which were the pride of the garden. "At any time of the year," continues Evelyn, "glittering with its armed and varnished leaves, the taller standards at orderly distances, blushing with their natural coral! It mocks the rude assaults of the weather, beasts, or hedge-breaker."

"A hedge of Holly, thieves that would invade,
Repulses like a growing palisade;
Whose numerous leaves such orient green invest,
As in deep winter do the spring arrest."

COWLEY.

Holly hedges are by far the best and most durable of all living fences, and afford the greatest degree of shelter, and no plant endures the shears or knife better: it delights in a rich sandy soil. It is of slow growth the first year or two after planting, but, when once established, it makes rapid progress. Baudrillart speaks of Holly hedges in France upwards of two centuries old. Ray mentions those of Lord Dacre, at his park in Sussex, and Sir Matthew Decker's, at Richmond. By far the most magnificent Holly hedges which are now in existence in Britain are those of the Earl of Haddington, at Tyningham, in Scotland; also those at Collington House, and those at Moredun, near Edinburgh and Dalkeith. Those at Tyningham are said to have been planted about the latter end of the seventeenth century, and are twenty-five feet high, and about thirteen feet in width. Those at Collington are from twenty-five to thirty feet high; and those of Moredun about twenty-three feet. The Holly is readily increased from seeds, by cuttings, budding, and grafting. For the manner by which these operations are performed, we beg to refer our readers to the various horticultural works treating on these subjects, as not exactly coming within the limits of the pages of "The Naturalist."

5, *Middle-Street, Taunton, Somerset, June,* 1853.

GLEANINGS BY THE WAY; WITH A FEW WORDS ON THE EARLY FLOWERING OF PLANTS NEAR GOSPORT.

BY JOHN ROSE, ESQ., M. A., F. B. S., M. D. R. N.

As was stated by Mr. Lloyd, at a late meeting of the Phytologist Club, the month of January was the mildest since the commencement of the present century. In addition to *Primula veris*, *Stellaria holostea*, *Ranunculus ficaria*, and *R. acris*, mentioned in my note of the 18th. of January, I found the following plants in flower on the 22nd:—*Lamium purpureum*, *L. album*, *Lapsana communis*, *Sonchus arvensis*, *Pyrethrum inodorum*, *Torilis Anthriscus*, *etc.*, with quite a profusion of *Ulex Europœus*, and that universal favourite, the "wee modest crimson-tipped flower," *Bellis perennis*.

On the 28th. January, I found *Potentilla Fragariastrum* in flower in a hedge leading from Lord Ashburton's beautiful marine residence. My excellent friend, Arthur Adams, Esq., R. N., F. L. S., having informed me that *Vinca minor* occurred in Rowner copse, about three miles from Gosport; we were accordingly much gratified by finding it in flower on the 28th. of January: it was first discovered here by Mrs. Arthur Adams, and is undoubtedly indigenous. *Vinca major* occurs in hedges near Haslar Hospital, and, if not truly wild, is at all events quite naturalized. In January we also observed *Scolopendrium vulgare*, and *Adiantum nigrum*, in hedges near Anglesey: the leaves of *Arum maculatum* were likewise conspicuous, along with the foliage of several of the *Umbelliferæ*.

These facts may appear trivial and of little moment, but they are interesting to the botanist who loves Nature for her own sake, and who does not disregard the simplest and most common of her phenomena. The mild weather of January has been succeeded by a snow-storm of unusual severity in this climate; but as the season advances, we hope to be enabled to give a detailed account of the Flora of the district. In the month of March it is delightful to watch the progress of vegetation, and to greet the spring flowers as they gradually and successively make their appearance.

"Stormy March is come at last
With winds, and clouds, and changing skies;
I hear the rushing of the blast,
That through the snowy valley flies.

Ah! passing few are they who speak,
Wild, stormy month, in praise of thee;
Yet, though thy winds are loud and bleak,
Thou art a welcome month to me.

For thou to northern lands again
The great and glorious sun dost bring;
And thou hast joined the gentle train,
And wear'st the gentle name of spring.

For in thy reign of blast and storm
Smiles many a long bright sunny day,
When the changed winds are soft and warm,
And heaven puts on the blue of May."

Royal Hospital at Haslar, Gosport, March 2nd., 1853.

A LIST OF THE MARINE TESTACEOUS MOLLUSCA OF THE DORSET COAST.

BY W. THOMPSON, ESQ.

In writing a list of the Marine Mollusca of the coast of Dorsetshire, I think it necessary to make one or two remarks on the presumed rarity of their occurrence. In order to carry out my "Fauna Dorsettensis," on which I am now engaged, I have been obliged from time to time during the three last years to turn my attention to Shells; this, therefore, has been the time during which the list has been made. The list contains two hundred and five species, all of which I have myself obtained, with the exception of the twenty-three against which I have placed a mark, thus *; and these I have given on the authority of Forbes and Hanley, in their "British Mollusca," and of Shells in the possession of a gentleman in this town, who obtained them at Weymouth. The nomenclature I have followed is that of Forbes and Hanley. I have obtained the greater portion of my Shells by dredging on the Oyster-beds; some few were picked up on the beach. There is a large zone of sand running between the shore and the Oyster-grounds which I have not yet explored; I therefore give the accompanying list, not as final, but merely as a complete one to this time: many now marked rare I may expect to find pretty plentiful, and also add other species to the list. I have not as yet found a single species of *Odostomia;* it is, however, idle to suppose that we have not a single representative of this family. I have placed at the bottom of the list the varieties we obtain here:—

Acmæa virginea. Not rare.
Akera bullata. Not rare.
Anomia aculeata. Rare.
„ ephippium. Common.
„ striata. Rare.
Aplysia hybrida. Rare.
Aporrhais pes-pelecani. Local.
Arca lactea. Common.
Artemis lincta. Not rare.
„ exoleta. Rare.
Astarte elliptica. Rare.
„ sulcata. Rare.
Buccinum undatum. Common.
Bulla hydatis. Not rare.
Calyptræa Sinensis. Not rare.
Cardium aculeatum. Rare.
„ echinatum. Not rare.
„ edule. Common.
* „ fasciatum. Rare.
„ nodosum. Local.
Cardium Norvegicum. Not rare.
„ pygmæum. Local.
„ rusticum. Rare.
Cerithium reticulatum. Common.
Chemnitzia elegantissima. Rare.
„ formosa. Rare.
„ rufa. Rare.
Chiton asellus. Not rare.
„ cancellatus. Not rare.
„ cinereus. Not rare.
„ fascicularis. Not rare.
„ lævis. Not rare.
„ ruber. Rare.
*Cochlodesma prætenue. Local.
Cœcum glabrum. Rare.
Corbula nucleus. Common.
* „ rosea. One, doubtful.
Crenella discors. Common.
„ marmorata. Not rare.
* „ rhombea. One specimen.

Cylichna cylindracea. Local.
„ obtusa. Local.
„ truncata. Local.
Cypræa Europæa. Common.
Cyprina Islandica. Not rare.
Cytherea Chione. Rare.
Dentalium entalis. Rare.
„ Tarentinum. Not rare.
*Diplodonta rotundata. Rare.
Donax anatinus. Not rare.
Emarginula crassa. Rare.
„ rosea. Not rare.
Eulima polita. Rare.
Fissurella reticulata. Not rare.
Fusus Islandicus. Rare.
Gastrochæna modiolina. Rare.
°Ianthina communis. Rare.
Kellia rubra. Common.
„ suborbicularis. Rare.
Lachesis minima. Rare.
Lacuna crassior. Not rare.
„ pallidula. Rare.
„ vincta. Rare.
Lamellaria perspicua. Rare.
„ tentaculata. Rare.
Leda caudata. Rare.
Lepton squamosum. Single Valves.
°Lima Loscombii. Rare.
Littorina littoralis. Common.
„ littorea. Common.
„ neritoides. Common.
„ patula. Common.
„ rudis. Common.
„ saxatilis. Common.
„ tenebrosa. Common.
°Lucina borealis. Rare.
* „ flexnosa. Rare.
° „ leucoma. Rare.
Lucinopsis undata. Local.
°Lutraria elliptica. Rare.
„ oblonga. Rare.
Lyonsia Norvegica. Rare.
Mactra elliptica. Not rare.
„ solida. Rare.
Mactra stultorum. Common.
„ subtruncata. Not rare.
„ truncata. Not rare.
°Mangelia attenuata. ? Rare.
„ costata. Rare.
„ gracilis. Rare.
„ linearis. Rare.
„ nebula. Not rare.
„ purpurea. Rare.
„ rufa. Not rare.
„ septangularis. Rare.
„ turricula. Rare.
Modiola barbata. Rare.
„ modiolus. Local.
° „ tulipa. Rare.
Montacuta bidentata. Rare.
„ substriata. Rare.
Murex erinaceus. Not rare.
Mya arenaria. Local.
„ truncata. Local.
Mytilus edulis. Common.
Nassa incrassata. Not rare.
„ pygmæa. Not rare.
„ reticulata. Common.
Natica monolifera. Not rare.
„ nitida. Not rare.
„ sordida. Rare.
Nucula nucleus. Common.
„ nitida. Not rare.
„ radiata. Not rare.
Ostrea edulis. Common.
Otina otis. Local.
Pandora obtusa. Not rare.
* „ rostrata. ? Rare.
Patella athletica. Not rare.
„ vulgata. Common.
„ pellucida. Not rare.
Pecten maximus. Not rare.
„ opercularis. Common.
„ pusio. Not rare.
„ tigrinus. Rare.
„ varius. Not rare.
Pectunculus glycimeris. Not rare.
Phasianella pullus. Common.

Philine aperta. Not rare.
*Pholadidea papyracea. Rare.
Pholas candida. Not rare.
„ crispata. Rare.
„ dactylus. Not rare.
„ parva. Not rare.
Pileopsis Hungaricus. Not rare.
Pinna pectinata. Not rare.
Psammobia Ferroensis. Not rare.
* „ tellinella. Rare.
* „ vespertina. Rare.
Rissoa anatina. Not rare.
„ cingillus. Not rare.
„ costata. Not rare.
„ inconspicua. Not rare.
„ labiosa. Common.
„ littorea. Rare.
„ parva. Not rare.
„ rufilabrum. Not rare.
„ semistriata. Rare.
„ striata. Not rare.
„ striatula. Rare.
„ ulvæ. Not rare
„ ventrosa. Not rare.
Saxicava Arctica. Not rare.
„ rugosa. Not rare.
Scaphander lignarius. Rare.
Scrobicularia piperata. Common.
Skenea divisa. Not rare.
„ planorbis. Not rare.
Solen ensis. Local.
* „ marginatus. Rare.
„ pellucidus. Not rare.
„ siliqua. Not rare.
*Solecurtus coarctatus. Rare.
Sphænia Binghami. Rare.
Syndosmya alba. Not rare.
* „ intermedia. Rare.
„ prismatica. Rare.
„ tenuis. Not rare.
Tapes aurea. Rare.
„ decussata. Not rare.
„ pullastra. Not rare.
„ virginea. Not rare.
Tellina crassa. Not rare.
„ donacina. Rare.
„ fabula. Not rare.
„ incarnata. Rare.
„ solidula. Rare.
„ tenuis. Not rare.
*Teredo navalis. Occasional.
„ Norvegica. Occasional.
*Thracia distorta. Rare.
„ phaseolina. Rare.
„ pubescens. Rare.
„ villosiuscula. Rare.
Trochus cinerarius. Common.
„ exiguus. Rare.
„ granulatus. Not rare.
„ lineatus. Rare.
„ Magus. Common.
„ striatus. Rare.
„ tumidus. Not rare.
„ Montagui. Not rare.
„ umbilicatus. Common.
„ ziziphinus. Not rare.
Trophon muricatus. Rare.
Truncatella Montagui. Local.
Turritella communis. Common.
Velutina lævigata. Rare.
Venerupis Irus. Not rare.
Venus casina. Rare.
„ fasciata. Rare.
„ ovata. Not rare.
„ striatula. Not rare.
„ verrucosa. Not rare.
*Xylophaga dorsalis. Local.

Varieties of British Shells found at Weymouth:—

Pecten opercularis.
Var. lineatus. Not rare.
Var. Andounii. Not rare.
Rissoa cingillus.
Var. graphica. Not rare.
Var. rupestris. Rare.
Rissoa parva.
Var. interrupta. Not rare.

Weymouth, April 4th., 1853.

ACCOUNT OF THE REMARKABLE MAY SNOW-STORM, WITH INCIDENTAL NOTICES OF ITS EFFECTS ON THE LIVING AND INANIMATE CREATION.

BY MR. T. LISTER.

The following particulars relating to the very remarkable snow-storm which occurred last May, may prove of some interest to the readers of "The Naturalist;" they were taken in the neighbourhood of Barnsley, Yorkshire; some of them during the occurrence of the storm, and others subsequently.

5th. month, 9th.—The barometer sank from 29-30° yesterday, to 29-15° and 29°. Through the early hours of the morning showers were continuous, which gradually changed to snow, increasing in the heaviness of the flakes towards noon, and continuing without intermission until late at night. Passengers, vehicles, roofs of houses, trees, everything was literally covered with a thick snowy mantle.

5th. month, 10th.—This morning the streets and houses are deeply enveloped in snow. The depth around the town is estimated at from nine inches to one foot, increasing in a westward direction towards the moors. At Stainbro', it is reported to lie from fifteen to eighteen inches; at Thurgoland, two feet; at Penistone, with careful measurement, it was found to be a depth of two feet three inches; and in many places above one yard. On the Derbyshire side of the great backbone of England, it is stated to be from three to four feet. The wind was changeable during the fall of this snow-storm, blowing from the N.E. by N. and N.W. at intervals. The extent to which the snow was mainly confined was in this district, on each side of the Moorland ridge, thinning off to the eastward towards Pontefract, scarcely extending to Wakefield northward, nor Chesterfield southward, nor Doncaster south-eastward, the snow changing to rain in those directions.

The damage to trees has been immense. The birch and the beech, with their numerous leafy sprays, and the budding oaks, have suffered the most in the woods about here. But the injury sustained here is nothing to be compared with that in the west and south-west districts. The woods of F. V. Wentworth, Esq., at Stainbro', and those of Lord Wharncliffe, at Wortley and Wharncliffe, suffered to the extent of thousands of pounds loss. Heavy losses have been sustained in the quantities of sheep that have perished. Such a snow-storm in May is not remembered by the oldest amongst us, and by few indeed at any period of the year. The quantity of water in the rain gauge on the roof of the post-office, indicated a fall to the unprecedented extent of two inches, and probably there would be some waste in the flakes of snow being blown from the receiver, previous to melting.

5th. month, 11th.—Took the first opportunity of getting out since the storm occurred, anxious to ascertain the state of my feathered favourites in this unlooked-for visitation of churlish winter. The effects have been serious to the nesting-birds, particularly the ground builders, as Larks, Grouse, etc.

A handsome cock Whinchat had been brought to me starved to death, and numbers of eggs were found cold in the deserted nests. To my great surprise, on passing down the fields to the Old Mill, I found the birds were neither chilled into torpitude, nor voiceless. The Tree Pipit, Green Linnet, and Storm Cock were singing merrily about the gardens and fields. The snow was fast melting away from the neighbouring slopes, but laid white and cold on the distant hills, there having been a partial frost during both nights after the snow. An unusually large flood had filled the Dearne valley. The water still covered the Fleets like a miniature lake. Rooks, Sky-larks, Meadow Pipits, Swallows, and Thrushes, were flying over the waters, or picking up insects or worms on patches which the flood had left. On the near bushes, the Whinchat, the Sedge Warbler, the Willow Wren, and the Jenny Wren were singing merrily; and in the Cliff wood, lower down, the Blackbird, the Whitethroat, and the Blackcap were tuning their mellow pipes, as if no unseasonable visitation had, but a few hours before, taken place, leaving its traces still on the fresh leaves and blossoms of spring.

5th. month, 16th.—I accompanied the temperance procession to Stainbro' Park. The visitors were, as usual, not numerous in the fore part of the day; but before evening, were estimated at fifteen hundred to two thousand. The amount taken at the gates, at the small admission fee, was near £15, leaving a profit of £7 clear towards the beneficent object of the society. The day was as fine as could be desired for this exhilarating and rational mode of spending Whitsun holidays. In sad contrast to this genial weather and the budding promises of summer, were the devastating traces of the late heavy snow-storm. The fine beech trees we had so admired the week before—one below the canal, partially leaved, and the one a little beyond the bridge, which we had contemplated as a perfect model of this noble tree, so ample in bulk, the trunk being about twelve feet in diameter, and so graceful in the proportion of its bold leafy branches—exhibited now a sad wreck of their former beauty and stateliness.

In taking the round of the park to preserve order amongst the irregulars always mingling in such companies, restraining the juveniles from pelting the Swans or running the timid Hares and Deer, I found constant traces of the devastating storm. The branches of many trees of the rookeries in the menagerie, and amid the tall oaks near Queen Anne's Lodge, were broken down by the weight of snow, increased by the quantity of nests they supported. In many cases, the branches, nests, and young birds had come down in a confused mass. The ravages made on the trees near the gamekeeper's cottage were still greater; but this was said to be nothing to the destruction experienced in the woods about Rockley. The splendid avenues of beeches, the admiration of all beholders, had many of their finest branches—some of them comparable to trees in themselves—fairly borne down on all sides by the superincumbent masses of snow. It was, therefore, with feelings of pain and pleasure that the diversified scenes of this fine park were surveyed on that day—pain at the devastation produced by one day's snow—pleasure in the

sight of the fair flowers, and trees bursting into vernal beauty, as if eager to outgrow and efface, by their luxuriance, the temporary check that vegetation had sustained.

It was truly the union of the hopefulness of spring with the ravages of winter, emblematic of human life, with its smiles and tears, its mingled sorrows and joys. But while the evils arising from causes man cannot control are many and grievous, those arising from his own misguided passions are more numerous and fearful. It was therefore, satisfactory, to see such a testimony against the greatest of these evils—the drinking customs—exhibited by the assembly of that day. Views of this nature were impressed at the meeting, summoned at the trumpet call and the exhilarating music of the fine accompanying band. The healthful open air sports, the range of the noble park, generously opened to all willing to avail themselves of the privilege allowed by the worthy owner, F. V. Wentworth, Esq., the sight of the pleasant gardens, and well stored picture gallery, were objects far worthier to occupy their well-won leisure, than the debasing excitement of "the house with the picture hung over the door," wide open at these times to lure the unwary and dissolute.

I had a little leisure to search for rare birds; the Nuthatch abounded in the pleasure grounds. The Pied Flycatcher was yet invisible, as on my last visit; the late cold, changeful weather may have retarded its arrival in this its only haunt in our neighbourhood. Beyond the temple, I saw some boys pelting what they call Jinties, one of their names for the Jenny Wren. I soon perceived that they were the Tree Creepers, running busily around the boles of the huge oaks. I let the lads see them through the telescope, the amusement of which softened down their persecuting instinct into a sort of admiration of these tiny interesting creatures. The gamekeeper, who supplied me with some eggs of Daws and other birds, had reserved for me the eggs of what he called the Blue Hawk, which he, with the fatal antipathy of his profession, had shot on the nest, but not captured. Comparing them with Morris's coloured Plates, I ascertained at once that they belonged to the Sparrow-hawk, the blue tint on the back of the male bird gaining it the above title. It could be no other bird, as the Blue Hawk—the Hen Harrier, setting aside the colour of the eggs, would not have been found there, it having become, with many more of its doomed race, extinct in this country, owing to the rapacity of scientific collectors, and the undying hate of game protectors.

This keeper maintains that the Kestrel preys on birds as well as mice; he is backed out by others of his class, one of whom states that he has seen the Kestrel devouring a Partridge: unless the Merlin or Hobby, both of which occur, though rarely, in this part, has been mistaken for this bird, the statement is at variance with the views of most writers. I lean to the book opinion, that with respect to destroying game, this Hawk is as harmless as it is handsome. We have also the testimony of that most observing field naturalist, Waterton, as to its harmlessness and utility to the farmer and

landed proprietor. The excellent remarks of his, quoted in the article on persecuted animals, by Dr. Morris, editor of "The Naturalist," appearing in Kidd's pleasing "Journal of Natural History," are surely sufficient to settle this point both with the learned and unlearned world. What with vulgar prejudices, and wanton destructiveness towards eggs and birds, encouraged, instead of being checked, by the scientific, in their over anxiety for making collections, and a grudging jealousy of losing a few brace of game, our Hawks and Eagles will follow the fate of the vanishing Bittern, and extinct Bustard; and instead of being admired in their living state, be known only to a future race, like the diornis of New Zealand, by their wasting skeletons.

Barnsley, July 23rd., 1853.

Miscellaneous Notices.

Malformation of Rabbits' Teeth.—On the 18th. of July, I had brought to me for preservation the head of a Rabbit with the fore teeth curiously formed; the two upper curved towards the roof of the mouth, but were unfortunately partly broken, whilst the two lower grew out to the length of one inch and a half and curved upwards, and appeared to be worn away towards the ends. The animal was shot by Mr. Clark, of Welton, near Louth, and was apparently full-grown.—J. Brown, Louth, July 25th., 1853.

Albino Shrew, (Sorex araneus.)—As a matter of interest which you may perhaps think worthy of record in the pages of "The Naturalist," I beg to state that yesterday my gamekeeper brought me in an albino specimen of the Common Shrew, (*Sorex araneus*, Linn.,) perfectly milk-white, without a speck or stain about it. Bell, in his "History of British Quadrupeds," makes no mention of a white variety, though he states that it is sometimes "spotted with white:" from this I judge that a perfectly colourless example is sufficiently rare and curious to merit notice. —W. V. Guise, Elmore Court, Gloucester, July 22nd., 1853.

Montagu's Harrier.—On the 13th. of June last I found a nest of Montagu's Harrier, *(Circus Montagui,)* on Roydon Fen, near Lynn. The nest, which contained two white eggs, was flat, and composed of coarse grasses; it was situated on the ground in a dry part of the Heath, and surrounded on all sides by stunted shrubs. I had a good view of the hen bird, as she left the nest, to which I had watched her, within a few feet of me. The Hen and Montagu's Harrier, as well as the Short-eared Owl, used regularly to breed on this Heath, but I have not heard of their eggs having been found there of late.—T. Southwell, Fakenham, Norfolk, August 1st., 1853.

Does the Tawny Owl, (Syrnium stridula,) *drink?*—In "Morris' British Birds," the Tawny Owl is said never to be known to drink: this is my sole excuse for the following notes from the biography of an Owl of that species:—In 1848, or thereabouts, an Owl's nest was taken from an old tree containing three Owlets; one of these came into the possession of my brother while still too young to feed itself. With care and attention it was reared and became perfectly tame. The lodging set apart for it was an outhouse in which turf was kept for the use of the house, (it being in Norfolk where turf is so extensively used as fuel.) The door of this outhouse was almost continually open, and the Owl, though neither confined or clipped in the wings, was almost as continually to be seen perched on the highest piece of turf, perfectly at his ease. A small shallow tub, containing water, was kept standing in the house, and the Owl seemed to delight in occasionally standing in the water, splashing it about and over himself by flapping his wings. Whilst thus enjoying his bath he would dip his bill in the water to drink, holding up his head after each libation in the same manner as the domestic fowl, and this he did so often that no one thought it at all an uncommon occurrence for a Tawny Owl to be thus engaged. He was kept for nearly three years, when he is supposed to have been shot in one of his nightly flights to a neighbouring wood, for he never returned as he had so often done

before and taken his place on the turf. Whenever the water was not supplied him he always flew to the pump, and remained there till his tub was filled and taken into his house. I hope some one who has the opportunity of watching a Tawny Owl will report progress, and throw additional light upon this subject.—M. C. Cooke, Trinity Schools, Lambeth, May, 1853.

Waxwing, (Bombycilla garrula.)—One shot at Smallburgh, in Norfolk, in the month of March in this year; also a pair of Ring Ouzels, (*Turdus torquatus*,) at Sutton, in the same county, during the week following.—Idem.

Blue-throated Warbler, (Phœnicura Suecica.)—Some time since I purchased a quantity of birds' skins, which had been bought of a Devonshire man who knew nothing about them, only that he skinned them; they were chiefly small common skins, and most of them in an indifferent condition; but amongst them was a very decent skin of a Blue-throated Warbler. This skin Mr. Haderaft has stuffed for me, and it was his opinion, which he gave me before knowing anything of its history from me, that it was a British skin: he never saw a continental skin, he said, filled out like it. I have tried to ascertain further particulars but cannot, only that the man skinned it himself, and did not know anything more about it.—Idem.

Note of the Blue Tit, (Párus cæruleus.)—During the continuance of the snow in February and March, I had quite a family of birds that daily visited my window for food, which was as regularly furnished as they were punctual in coming for it. Blackbirds, Thrushes, Robins, Sparrows, and Tits all fed in peace and joy; the Robins only would enter and perch on our breakfast-table. The others however were very tame; and from a Blackbird we had many a note of thanks; but whilst the Robins gladly and merrily sang in our warm study, the Blue Tit replied, and had I not distinctly seen and heard the songster, I should have stated it was a Robin singing. But I can add further testimony: we, at present, have a Blue Tit's nest in our garden in a Lauristinus, and regularly the male Tit sits, after his feeding the brood, on the top of the shrub, and sings away very gaily. I think you will observe that the notes of this bird are much harsher and shorter than those of the Robin, and are devoid of that gradual cadence with which the Redbreast often ends his lays, or rather sinks in melody, that he may, like the Nightingale, break out in richer music.—George R. Twinn, Bawburgh Hill, near Norwich, May 9th., 1853.

My first egg obtained this year, was that of a Hedge Sparrow, (*Accentor modularis*,) found in a nest in a hedge of a north-east aspect, and nearly buried in a snow-drift. The egg is decidedly the smallest of the kind I ever saw. The day, March 23rd. Idem.

On April 17th., I found a Kingfisher's nest, (*Alcedo ispida*,) and possessed myself of two eggs. This is the earliest date I ever obtained the eggs of this bird.—Idem.

On April 20th., I found a Robin's nest, and obtained a perfectly white egg from it; the others being of the usual colour.—Idem.

The Cuckoo, (*Cuculus canorus*,) was heard in this neighbourhood on April 23rd., nearly three weeks beyond the usual period.—Idem.

The Swallow, (*Hirundo rustica*,) appeared April 9th., 1853; the Sand Martin, (*Hirundo riparia*,) April 19th.; the Martin, (*Hirundo urbica*,) May 7th.—Idem.

Arrival of the Hirundines, etc., at Minehead, Somerset, in 1853.—By Captain Gifford.

Swallow, (*Hirundo rustica*,) April 8th. Martin, (*Hirundo urbica*,) May 5th. Swift, (*Cypselus apus*,) May 9th. Cuckoo, (*Cuculus canorus*,) April 27th.

The Swallow, (Hirundo rustica.)—On the 15th. instant, I noticed that the Swallows had arrived in this locality, having seen a pair flying about my father's house; in a stable near to which there have been Swallows' nests for many years past. On the 17th. instant, whilst walking across Baguley Moor, I saw a pair of Swallows flying to and from a house, and on going up to the house, I found that they were busily engaged in building a nest, part of which they had already constructed.—John Balshaw, Post Office, Altrincham, April 19th., 1853.

Chimney Swallow on the 8th. of April, near Gosport.—On taking a walk to-day near Alverstoke I was delighted by observing the Chimney Swallow, (*Hirundo rustica*,) the first which I have seen this year. I think it is rather earlier than usual, and therefore worth placing on

record. "It was a sweet carol," says an amiable and talented author, "which the Rhodian children sang of old in spring, bearing in their hands, from door to door, a Swallow as herald of the season.—

The Swallow is come!
The Swallow is come!
O fair are the seasons, and light
Are the days that she brings
With her dusky wings,
And her bosom snowy white."

—John Rose, M. D., R. N., Haslar Hospital, Gosport, April 8th., 1853.

The Swift, (Cypselus apus,) *at Driffield.*—I saw, this evening, May 19th., a Swift hawking for flies, for the first time this year. Weather fine, *but cold.*—B. R. M., Driffield, May 19th., 1853.

Rare Birds near Plymouth.—I have met with the following rare birds, or at least they are so with us, in the neighbourhood of Plymouth, in course of the past year. February, 1852, Little Gull, *(Larus minutus,)* shot in Plymouth Sound. March, Wryneck, *(Yunx torquilla,)* shot at Pennycomequick. July, Puffin, *(Fratercula arctica,)* shot in the mouth of the River Erme, a young bird: can any of the readers of "The Naturalist" inform me if the Puffin has been known to breed on the southern coast of Devon? December 11th., Cinereous Shearwater, *(Puffinus cinereus;)* a pair of these birds, male and female, were captured in the sound in an exhausted state, by a couple of Trawl boys, of whom I purchased them alive the same evening. March, 1853, Pintail, (*Anas acuta,*) shot on the Tamar, in company with the common Mallard. April 21st., Hoopoe, (*Upupa epops,*) alighted on a mackerel boat, between the Eddystone and Plymouth breakwater, quite exhausted; insomuch that he suffered himself to be taken by the hand without attempting to escape.—J. Banker, Stonehouse, April 23rd., 1853.

The Sparrow, (Passer domesticus.)—The chairmen at the stand in Queen's Square Bath, have tamed a number of House Sparrows. Eight or ten of these birds will fly down off the adjoining house-tops at a whistle; and come round them, catching in the air crumbs that they throw them. Two, both male birds, will fly upon their hands, and take food out of their mouth: they had never been in captivity.—J. Williamson, Jun., Sherborne, Dorset, April 22nd., 1853.

The Wheatear, (Saxicola œnanthe.)—March 29th., I noticed for the first time this year, a pair of Wheatears at Lenthay. These birds are very scarce in this neighbourhood; I have not seen any since I have been a resident here, before this occasion.—Idem.

The Common Martin, (Hirundo urbica.)—April 2nd., a pair were flying over the river at the same place. Wind S. W.; the three previous days had been excessively cold.—Idem.

Nesting of the Woodcock, (Scolopax rusticola.)—April 14th., I went over to Middlemarsh, about eight miles off, to see the nest of a Woodcock, that I heard was in a cover belonging to H. G. Sturt, Esq. I found the bird had forsaken the eggs after she had sat on them for a week, in consequence of being repeatedly disturbed: I procured the eggs, four in number. The nest, or rather the bare ground on which the eggs were laid, was in an exposed place in the short cover. A similar thing occurred in the same neighbourhood seven years ago.—Idem.

Occurrence of the Hoopoe, (Upupa epops,) *in Dorset.*—I am informed by Mr. Henry Turner, a surgeon in this town, that the nest of the Hoopoe was taken on three or four occasions by the school-boys, from the pollard willows on the banks of the river at Lenthay, and that they were known by the name of Hoops. He has seen a specimen in my collection, and is quite certain he is not mistaken. The fact of a pair having been seen frequently last autumn at Sotnell corner, would seem to give credit to his assertion.—Idem.

I have in my collection a pair of Bohemian Chatterers, or Waxwings, (*Bombycilla garrula,*) and a Spotted Rail, (*Crex porzana.*) They were shot in this neighbourhood, but I have been unable to trace the exact time.—C. Stubbs, Henley-upon-Thames, Oxon.

Crested Grebe, (Podiceps cristatus,) *and Red-necked Grebe*, (Podiceps rubricollis.)—On the 27th. of November last a very fine specimen of the Crested Grebe was shot here; I had it

preserved for my collection. A specimen of the Red-necked Grebe was obtained here in the winter of 1850, which is also in my collection. These Grebes are somewhat frequently met with here in the winter.—Idem.

Dotterel, (Charadrius Morinellus.)—A pair of these birds, male and female, were shot by Mr. John Henry Frankling, on the moor at Seaton Carew, on the 16th. of May, 1853.—W. Martin, Stockton, May 30th., 1853.

Robin's Nest, (Erythaca rubecula.)—I found a Robin's nest this year on the ground at the bottom of a deep cutting amongst dead leaves, etc., sheltered under the broad leaves of a Digitalis plant. The nest contained five eggs, which were deserted after a heavy shower of rain, the nest having been flooded with water.—Stephen Clogg, Looe, May 2nd., 1853.

Woodcocks' Nests, (Scolopax rusticola.)—That very singular occurrence, the discovery of two Woodcocks' nests, was made by Mr. Elijah Smith, the head gamekeeper to the Earl Carnarvon; the first was found on the 6th. instant, and the other on the 9th. instant, in the grounds at Highelere, each bird sitting on four eggs. The Woodcock is a native of the countries bordering the Baltic, which it leaves in autumn, on its route to this country, and generally returns in March and April. The nest is formed on the ground, usually near the stump of a tree; the eggs rusty gray, blotched and marked with dusky spots.—(Copied from the Wiltshire Independent,) by R. W. Cradock, Hackney, April 23rd., 1853.

Nest of the Nightingale, (Sylvia luscinia.)—On the 21st. of May last, walking at the Birmingham reservoir with a friend, we found a Nightingale's nest with eggs; as I am not aware of its ever having been known to build about this neighbourhood before, I beg to inform you of it: I have one of the eggs now in my possession.—H. Buckley, Calthorpe-Street, Birmingham, August 8th., 1853.

Nesting of the Nuthatch, (Sitta Europœa.)—In a small but deep hollow of a shattered tree, about twenty feet from the ground, a pair of these birds selected their retreat, and had intended rearing a brood had not my robbery prevented them. I had a very fine opportunity of observing their peculiar mode of nesting. At the bottom of the hole about thirty small pieces of bark, (from the beech tree,) were carelessly laid, and, without any other aid to promote heat and assist the bird in the period of incubation, this was the sole means, apparently, to be employed. An egg was deposited on them, a layer of bark over it, and so the work proceeded regularly, till the seventh egg was deposited, and then over all the bird began carefully to sit, and heat the pile of bark. I observed no variation in the daily appearance of the nest, to warrant any supposition that the eggs in regularity were removed from top to bottom, nor can I well fancy such a process without damage to the eggs in such a nest, formed so indifferently and without any soft materials. Now I have no doubt, from the depth of this hole, that the birds had with their "hammer-bills" bored to a depth (exceeding the natural) of nearly nine inches; and at the base of the tree many—very many—chips of wood were readily discernible. I have for several mornings scarcely missed observing, from four o'clock till long after five, a pair seated on a poplar tree, and as I read in my room, or ramble round our field, I hear their hammering, as though to them it were a merriment and a joy. They are called "Creepers" here; and very active birds they are in scouring trees for insects, and digging for vermin. I have met with instances of the nests of these birds in the side of a trunk of a tree, and where the bark and wood have, on removal, left *white* traces that might betray their locality, I have seen a thin coating of dirt brushed over to imitate the natural appearance of the bark, and delude the eye. The under plumage of these birds beneath the wings is, in many specimens, very rich—of a deep claret-colour. I have never met with eggs entirely white, but, on the contrary, all have an abundance of red spots on a clear white ground, and not small ones neither, but certainly not to be called blotches.—G. B. Twinn, Bawburgh Hill, near Norwich, August 11th., 1853.

A White Magpie, (Pica caudata.)—In No. 15, of "The Naturalist," (May, 1852,) appears a description of a White Magpie, to which was added a promise by me, that if ever I had an

opportunity of giving more information respecting her, I would do so; unfortunately I now have that opportunity, as she was shot last week; I say unfortunately, because she was in such a ragged state of moult, that she would almost bear a comparison with the celebrated Jackdaw of Rheims, whilst under the curse of the church of Rome, "with his feathers all turned the wrong way." On comparing the following with my former communication, it will be seen that she has grown much whiter.—She has the right wing now white, with the exception of the outer part of one of the primaries; the left wing has three of the primaries, and two of the secondaries (new feathers) mottled; there are a few old feathers black in the middle of the back, with a very small sprinkling of black feathers on the neck and breast, more so on the left than right side; there are three or four dark brown feathers (old) on each shoulder; the remnant of her tail (old feathers) is of the natural colour, the two longest feathers of which are wanting, and are being replaced by two new feathers, now about a third of their proper length, one of which is nearly white, whilst the other is more of the usual colour, showing that the *whitening* was still going on; and I have no doubt had she been spared a few years longer, she would have become quite white. Her legs are flesh-colour behind, black in front; feet and beak black, with eyes of the natural colour. She weighed seven ounces, and the apparent smallness of her head, noticed in my former communication, would be accounted for, by the back of the head and a portion of the neck being denuded of feathers, which appears to have been of considerable standing. She has been mounted by my friend, Mr. C. Jackson, whose interesting communications frequently appear in "The Naturalist," and he has succeeded in making out of a mass of rags and filth, a much more respectable-looking bird than I thought could have been possible.—Stephen Clogg, Looe, July 27th., 1853.

Malformed Hen's Egg.—I met with a singular malformation in an egg a few days since, which had been laid by a Hen. It was two unshelled eggs, linked together by a white membranous substance about an inch long, being a circular tube somewhere about a quarter of an inch in diameter. The eggs were about the size of a Pigeon's egg—both of the same size and shape. The one contained the yolk, and the other the white, each entire and unmixed.—D. Thorn, Preston, Yorkshire, May 13th., 1853.

A Curious Fish was taken out of the river flowing through this town, about a month since, by a friend of mine. Owing to its being very decomposed, he could not make out the genus, but he had it carefully cleaned. There were no side bones, but the vertebræ measure in length about four feet; I have a small portion of it that was detached, and should be glad to forward it to any reader of "The Naturalist," who could give me any information on the subject.—J. Williamson, Jun., Sherborne, Dorset, April 22nd., 1853.

May not the fish have been a large Eel.—B. R. M.

Experiment in the Propagation of Fish.—We understand that Dr. Robertson, of Dunkeld, questioning the popular idea as to the natural history of Fish, which is that the male and female meet on the redd, or spawning bed for the purpose of each depositing its roe and milt in the channel—and conceiving, on the contrary, that the ova of the female were impregnated previous to their development within the body of the fish—in order to test this theory, took a number of live female trout from the spawning bed, and having extracted the roe, deposited them in a perforated zinc box, containing also some gravel. All these, on the 14th. of October last, were placed in a running stream, and on examining the box last week several of the ova were found to be hatched, of which a specimen may be seen by any one taking an interest in the matter. The proof of this will completely do away with the trouble of obtaining the milt to apply to the roe, as is done by the French fishermen, and establishes a theory strongly advocated by Mr. T. Stoddard. From the severity of the winter the whole of the ova are not yet hatched, but a sufficiency are to prove the truth of this theory. We understand that the Dr. is preparing a detailed account of the experiment, which will appear soon.—*Perth Courier.* Communicated by the Rev. W. Waldo Cooper.

Occurrence of the Sharp-winged Hawk Moth, (Metopsilus celerio.)—My sister captured, in the beginning of October last, a very perfect specimen of the Sharp-winged Hawk Moth. Perfect specimens of this very rare British Sphinx *are not often* to be met with.—C. Stubbs, Henley-upon-Thames, Oxon.

Curious fact.—On the night of the 18th, instant, while examining the sallows with a lamp, I captured rather a curious looking pair *in copulâ*, which proved to be a ♂ *Tæniocampa cruda*, and a ♀ *T. rubricosa*. I kept the ♀ for a few days, with the hope of getting eggs, but without success.—W. THOMPSON, Crewe, April 23rd., 1853.

The Death's Head, (Acherontia atropos,) *at Marske.*—I have to record the capture of a fine female specimen of the Death's Head Hawk Moth at Marske Hall, by Lady Margaret Yeoman, It contained numerous eggs; I counted sixty-three, but there were probably more.—D. FERGUSON, Redcar, August 13th., 1853.

Vanessa Urticæ.—I obtained a specimen of this common *Vanessa* on the 8th. of March, in its imago state, in one of our class rooms: this is the earliest that ever I saw it.—JAMES TAYLOR, Pitmixton, Aberdeen, March 3rd., 1853.

It had probably hybernated.—B. R. M.

Natica helicoides.—I obtained a specimen of this rare shell at the Cove, a fishing station, about three miles from Aberdeen, in 1849, which is the same as that found fossil by Sir C. Lyell, in the Norwich Crag, and figured in his paper on the Fresh Water Deposits of Eastern Norfolk. It has been described by Dr. Johnstone, as well as Sir C. Lyell, as *Natica helicoides*, although it in appearance has a resemblance to the genus *Bythinia* or *Paludina*. Another instance of its occurrence recently, is that mentioned by Mr. Jeffreys, who found a specimen in Lerwick Sound, while dredging there; and one by the late Dr. Macgillivray.—Idem.

Flustra Murryana.—A specimen of this beautiful and somewhat rare Zoophyte was found on the beach at Aberdeen during the last storm, by Mr. Clark, Old Aberdeen.—Idem.

A new habitat for Physospermum Cornubiense, *(D. C.)*—The discovery of a rare and local plant, in a locality where it has not been before noticed, must always be interesting to the lovers of Botany, particularly to those who study the local distribution of plants. Some of the readers of "The Naturalist" will, no doubt, be interested to learn that I gathered it in a wood called the Clether, on the Cornish side of the Tamar, on the 14th. instant. At the old station on the Devonshire side I saw but one specimen in flower. This is interesting in a Botanical point, for the plant was reported to have been lost, on account of some agricultural improvements that had taken place, but not looked upon as such by the Botanists of the neighbourhood. I saw plenty of roots around, although not in flower. *Hypericum linearifolium*, (Vahl.,) and *Asplenium lanceolatum*, (Huds.,) were very fine; I gathered specimens of the latter with fronds measuring twenty inches in length.—J. BANKER, Plymouth, July 21st., 1853.

The Retrospect.

Cuckoo v. *Wagtail.*—In vol. ii, page 20, of "The Naturalist," a correspondent, in a note headed "Curious freak of the Pied Wagtail," mentions having had a nest of the Redstart, (*Phœnicura ruticilla*,) brought to him, containing an egg of the Pied Wagtail, (*Motacilla Yarrellii.)* I venture to ask this correspondent, through the medium of your pages, and I trust he will not consider my doing so offensive, whether the egg of the Cuckoo, (*Cuculus canorus*,) in its different varieties, is perfectly familiar to him? and whether he paid sufficient attention to the size of the egg in question, to be able to pronounce with certainty as to its being the production of a Pied Wagtail, and not that of a Cuckoo? for otherwise I would suggest that it was far more likely to have been produced by a bird of the latter species. The egg of the Cuckoo, be it observed, is not much larger than a full-sized Pied Wagtail's egg; and in one of its varieties—I have, amongst others, this same variety in my own collection—so closely resembles it in colour and markings, that a casual observer, who paid but little regard to a slight disparity in size, might readily mistake one for the other. The nest of the Redstart too, if favourably situated, would be extremely likely to be selected by the Cuckoo, as a fit and proper receptacle for its egg.—STEPHEN STONE, Brighthampton, near Witney, May 26th., 1853.

Heterogena asellus.—At page 263, vol. ii, of "The Naturalist," there is a communication headed "Captures of Lepidoptera," by R. S. Edleston, Esq.; respecting the communication it appears to me there is only one species in the list captured by himself. I did hope

some of your numerous correspondents, better qualified than myself, would have written to you about it, especially as it has called forth many remarks from the members of two Entomological Societies to which I belong. As no one has done so, and as the communication, instead of giving information, tends rather to throw dust in our eyes, I now venture to correct one statement. He says, at the end of June Bleakley made an excursion of ten days to Brockenhurst, in the New Forest, and on the bole of an oak he captured a fine ♀ of *Heterogena asellus*, *etc.* Now, my veracity is quite as dear to me as Mr. Edleston's is to him, and as I have told all my entomological friends that I took the specimen of *Heterogena asellus*, which he says my friend John Bleakley took, I feel it a duty I owe to myself to correct Mr. Edleston's assertion, by informing your readers that *I* took the species he names, sitting on a beech tree, (not oak,) near Brockenhurst, in the New Forest, on the 10th. day of July, 1852. Now as a beech and an oak make a wonderful difference in a communication, especially when it would lead any one to neglect a locality where the insect *has been taken*, (not that I am sure *Asellus* feeds on beech,) to hunt where it was only said to have been taken. I think you will excuse my occupying so much of your space, if by so doing I enable some of our fellow entomologists to save their time. It is quite time all mystification should be done away with amongst entomologists, and I hope I have cleared up any doubt about *Asellus*.—Thomas Hague, Cock Brook, Ashton-under-Lyne, March 15th., 1853.

We insert the above communication; but would observe with respect to it, that we feel quite sure Mr. Edleston, whatever may be the absolute facts, never *intended* to mislead any one as to the locality in question. A mistake between an oak and a beech might easily be made. B. R. M.

The Querist.

The Hedgehog, (Erinaceus Europœus.)—If a stick is inserted in the ground and shaken, or if the ground be beaten for some time with a spade, worms will rise to the surface. Does the Hedgehog in performing his circuits, as described in "The Naturalist," vol. iii., pages 35 and 81, cause a sufficient vibration in the ground to produce the same effect, and thus enable him to procure food.—H. Buckley, Calthorpe-Street, Birmingham, August 8th., 1853.

Can any reader of "The Naturalist" furnish me with a more recent instance of the Honey Buzzard, (*Pernis apivorus*,) breeding in Great Britain, than that mentioned by Gilbert White, in his "History of Selborne.—H. S., Richmond, Yorkshire.

I perceive in "The Naturalist," that one of your correspondents has received some eggs, of the size and colour of those of the Common Thrush, (*Turdus musicus*,) but spotted with brown, instead of black. Now this spring I obtained from Walton, in Surrey, three eggs resembling those above described, but blotched, not spotted, nearly all over with light rufous brown, one of them most so at the smaller end. The blotches vary much in size, some of them being very large for the size of the egg. Whilst staying last year at a village in Mid Kent, four eggs were brought to me, which had been taken from a nest built in the hollow of an old apple tree, about three feet from the ground; they are somewhat less than those of the Wryneck, but not of such a clear white; they are altogether without markings, except one small spot on the side, near to the larger end, of a pale purple; one of them has a spot somewhat darker than the others: their size is about that of a small pin's head. As I am unacquainted with these, I shall feel obliged if any of your correspondents can give me any information respecting them, through the medium of "The Naturalist."—N. Robson, 2, Pier Head, London Docks, July 1853.

In reply to Mr. Buckley's query, page 160, the eggs mentioned are most probably those of the Missel Thrush, (*Turdus viscivorus;*) which I have seen in the nest, with the ground colour very nearly like those of the Thrush, and with the usual reddish brown spots; their identity could not be mistaken, as the bird was sitting, and allowed of a very near approach.—C. Jackson, East Looe, July 16th., 1853.

Can any of the numerous readers of "The Naturalist" say what becomes of the young Lobster and Crawfish, previous to their attaining a marketable size? Although the old ones are commonly taken in spawn here, the young are never seen.—Idem.

BRITISH MUSEUM NATURAL HISTORY

A WALK ON THE SHORE.

BY O. S. ROUND, ESQ.

What the groves and fields are to the villager, the sea-shore is to the dweller on the coast; and although the shadows of the cliffs are not of that transparent green that the gaze loves to dwell upon, we have but to turn our eyes aside and we encounter a hue more softly verdant than all the green leaves in the world can supply; indeed I have often looked dispassionately on a serene day at the hue of the ocean, and come to the conclusion that the colour was unrivalled in its transparent brightness. Although the chorus of sweet throats echoes not on the ear, it would ill befit the scene, which assimilates more properly with the wild cry of the Sea-Mew, or the wail of some lone denizen of that "trackless way" as he wings his solitary flight over the pathless waters. The woods charm us, but such a scene as this awakes a far higher and nobler impulse; and the spirit is carried far, far over the deep blue sea, where there is not a spot of land whereon to rest the foot, for the jutting rock, over whose head the foam chafes and boils in eternal fretfulness, is but a land-mark to be flown from and not approached. How often at early morning have I wandered by the edge of the dancing and dashing billows; how have I turned my face with a grateful sense of refreshment to the tossing foam, till the spray had passed over and around me in a silvery and misty cloud. Oh! it was a delicious pastime, it was as a revival after sickness, as a draught to the thirsty, as a meal to the hungry, and more, for it was a banquet to the fancy, a something which at once fed the present sense, and laid up store for long and delightful memories, that even now steal over me with a benign influence as I write. Who is there, let me ask, that has not at some time of his life met with such enjoyment, and who does not call it up at will to light up some gloomy fantasy withal; surely it is a wise antidote. To the man of science, there is far more than this to absorb the thoughts; whilst the casual observer may be struck with the grace, or something more of the mighty Grey Gull, as he sails with his hollow wings in the fields of air, or attracted by the smooth-round pebbles that bestrew the beach; there is more, much more which meets *his* eye, the feathered tenants of air are familiar to him as friends, even at airy distance; he distinguishes with certainty the different species, watches their various manners of flight, their various modes of life with no common interest, and pursues them in his mind's eye to their far off homes in the desert and rocky islet, which itself furnishes its stony treasures. The very sand beneath his feet is strewn with these, and it is a chance if he goes home empty-handed, or uninstructed in some new natural wonder; then look at the briny waters, as they leap upon the shores, what wonders they contain—the Zoophyte, the Gorgonia, the Star-fish, the Medusa, the Argonaut, or a hundred more, which people them by day, or illumine them by night.

It is a wondrous reflection, and lifts our minds far, how far above this lower

world. There is something even in the roaring of the liquid mass which strikes us with awe, and a feeling not akin to any other, for it is mingled with pleasure and with fear. What is that vast liquid magazine, whence does it arise, and where are its limits? We cannot compass the breadth and depth, though we span it in the bounding ship, or cast the lead into the waters in vain; and it is then we see and compass the might of the Great Creator, "who holdeth the seas in the hollow of His hand." Its very desolation is its charm, for desolation cannot exist without freedom, and the imagination roves in wider circuits, and expands in vast proportions with the impressions which such a scene conveys. Nor let it be supposed that the intimate knowledge of the details of such a mass of material detracts from its greatness, far from it; it adds to the sublime impression, and it is only He who can compass all the wonder that can see it aright.

We feel, as we stand wrapt in contemplation, with sea, sky, and cliff for our companions, that this indeed is the proper home of the more ethereal part of man, and there never, I suppose, can be a time when the grosser particles of one nature are more insignificant, and more divided from the purer and more divine.

August, 1853.

LOCAL JOTTINGS.—No 9.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

The Swallow, (Hirundo rustica.)—This year, I observed for the first time the arrival of the Swallow on Sunday, April 17th.

The Cuckoo, Cuculus canorus.)—And of this favourite bird on Tuesday, April 19th.

The Wheatear, (Saxicola œnanthe.)—And of this pretty-plumaged bird on Thursday, the 28th. of April.

"Agassiz Poissons Fossiles."—I was rather "taken aback" some time since, at a young man whom I knew, and who was just taking a liking to the study of Natural History, coming to me with a catalogue of books, to ask my opinion on one of them he was about to purchase. He said, "I did n't know that Fossils were poisonous before;" nor did I, he was informed. He then said, "Oh yes they are, and I think I shall buy the book; it is called 'Researches as to Poisonous Fossils.'" I looked, and to my amazement, found it was "Agassiz Recherches sur les Poissons Fossiles," &c. I should scarcely have thought of mentioning this as a local note, had not the young man been a Dorset specimen of the genus *Homo*.

Cochin-China Fowl.—The following very curious circumstance may now be witnessed in this neighbourhood. Between two and three months since, Herbert

Williams, Esq., of Stinsford House, near Dorchester, had in his poultry yard a Duck sitting on some ten or a dozen eggs, and by accident a Cochin-China hen deposited an egg in the nest amongst the other eggs, during the temporary absence of the Duck for food; and the little chick was hatched on the same day as the young Ducklings. Singular to say, she took to the water immediately in a similar manner in all respects to the Ducks, and may now be seen daily disporting herself in it, as if it were her native element. She accompanies her brother and sister Ducks to the water in the morning, and in the evening picks up worms, etc., in the Park like them, and returns to the yard with them. She will not consort with the chickens, although there are several broods also in the same yard. She thrives well, and is a very prettily-marked little hen.

Dorchester, July 9th., 1853.

AUTUMNAL NESTING OF THE ROOK.
(*CORVUS FRUGILEGUS.*)

BY STEPHEN STONE, ESQ.

In a recent number of "The Naturalist," vol. iii. page 61, the Rev. W. Waldo Cooper expresses himself surprised at finding the nesting of a Rook with eggs in the month of October; and moreover states that he never heard of Rooks 'sitting' at that season. It may be interesting to that gentleman, and others of your readers, to find, that although it is by no means a common occurrence, yet that it does occur, and more frequently perhaps, than may be generally known.

In former times, when superstitious notions prevailed to a much greater extent than they do now, and when unusual occurrences, of what sort or kind soever they might be, were wont to bring dread and dismay to the minds of those 'luckless wights' whose lot it might be to witness them, from a feeling that some terrible calamity was suddenly about to befal them, this unseasonable nesting of the Rook was looked upon as boding some dire disaster to those whose immediate neighbourhood it might chance to select for that purpose.

The first instance of the kind which came under my observation, occurred at a Rookery near the seat of the Marquis of Chandos, at that time the residence of his father, the present Duke of Buckingham and Chandos, at Wotton, Bucks. Events at all remarkable which occur very early in life, are wont to impress themselves upon the memory far more indelibly than those which occur in after years; thus, being at the time but a mere child, I have a much more distinct recollection of every circumstance connected with the event I am about to narrate, than of many things quite as remarkable which have happened since.

There had been a terrific snow-storm throughout the night of the 31st. of

October, 1823, and on the morning of the 1st. of November, we were awoke by the crash occasioned by the falling of huge limbs and branches of trees; the superincumbent weight of the snow, occurring as it did, before the fall of the leaf, causing them to give way on all sides, so that in a few hours, long avenues of stately trees were, throughout this finely timbered district, completely despoiled of their beauty; and when daylight appeared, the ground was found to be strewn with their fragments; and in such immense quantities that hundreds of loads were collected in this parish alone—enough, in fact, to supply its entire population with fuel the whole of that winter, and the greater part of the succeeding one; exclusive of a vast quantity of a size large enough for building and other purposes. Amongst the wreck occasioned by this storm, a nest of young Rooks nearly fledged was discovered. A young unfledged Ring-Dove, (*Columba palumbus,*) was also, on this memorable morning, found in the same locality.

Since that time I have met with several other instances in that county and the adjoining one, Oxon; but as I neglected to note the particular years in which they occurred, I must pass them over without further notice, and proceed to record three which have recently occurred in the latter county, in three successive seasons. In November, 1849, a pair succeeded in rearing their young brood in a Rookery at Standlake, near Witney. In November, 1850, another pair produced their young at Cokethorpe Park, the seat of Walter Strickland, Esq. They were not, however, successful in their endeavours to rear them, for the weather becoming intensely cold, they perished when about half-fledged. In the latter part of October, 1851, a nest was again formed in this park, but a sudden change in the weather put a stop to further proceedings, so that no eggs were this time laid. Two young unfledged Ring-Doves were also this year brought to me the first week in November.

Occurrences of this kind usually take place when there happens to be at this season a long continuance of the "dark, still, dry, warm weather," which the late Rev. Gilbert White did not fail to notice as "occasionally happening in the winter months;" and the effects of which he has so truthfully described in some lines upon the subject, contained in various editions of his delightful "Natural History of Selborne." At such times, to quote from the lines above mentioned

> "The cawing Rook
> Anticipates the spring, selects her mate,
> Haunts her tall nest-trees, and with sedulous care
> Repairs her wicker eyrie."

I am of opinion that these unseasonable and generally abortive attempts at reproduction, are to be attributed to young birds of the year—precocious individuals, who would fain be wiser than their parents.

> "Choose not alone a proper mate,
> But proper time to marry,"

is the lesson deduced by the Poet Cowper, from an analogous circumstance,

and commended by him to the serious attention of his fair unmarried countrywomen; and it is a lesson exceedingly wholesome, and one by which they might largely profit withal.

It may not be altogether out of place, here to record a circumstance which I think must generally be considered as very extraordinary, and which, as far as my experience goes, is wholly unprecedented; namely, that within the narrow limits of these two counties, Oxon. and Bucks., incubation was going on, and nests and eggs might have been obtained throughout every month of the year 1849, with the exception of the last; for before the end of January, the Redbreast, (*Erythaca rubecula*,) had built its nest, laid its eggs, and was found 'sitting' on them at Weston Turville, near Aylesbury.

On the 27th. of February, I found the nest of the Song Thrush, (*Turdus musicus*,) with eggs, in the grounds of my brother's residence, Terrick House, near Wendover.

In March, and throughout the spring and early part of summer, there was, of course, no lack of eggs of various kinds.

In July and August, I observed the Common Greenfinch, (*Coccothraustes chloris*,) amongst the evergreens on the lawn of Terrick House, steadily persisting in its attempts to bring out a final brood.

In September, the House Martin, (*Hirundo urbica*,) had eggs; and in October and November, the Ring-Dove and Rook were 'sitting.'

Brighthampton, near Witney, Oxon., June 13th., 1853.

LETTERS OF AN ORNITHOLOGIST.

(*Continued from page* 188.)

LETTER VII.

Iona, September, 1852.

A PAIR of Eider Ducks and a pair of Shieldrakes have successfully reared their broods upon Soay Island, and have gone off with their families unmolested. Another Shieldrake's nest was discovered upon one of the Treshinish Isles by a youth connected with the fishery, and while he was handling the eggs he observed another hole at the back of the Shieldrake's nest, and discovered within it a Shearwater, (*Puffinus Anglorum*,) sitting upon her egg.

On the 6th. of this month, when on a visit to Staffa, we shot a number of Guillemots and Razor-bills; they were mostly birds of the year, and among them was one young Bridled Guillemot, (*Uria lachrymans*,) though in immature plumage, the white line round the eye was quite distinctly marked, but the bird was too much injured to preserve. We took away a pair of young Rock Doves, (*Columba livia*,) from Soay, intending to rear them by hand, as we have often done before; but it happened that a pair of Tame Pigeons had just had their young taken by a cat; and of their own accord the bereaved parents immediately took to the two orphans, and brought them up.

By the last post I forwarded a pair of young Petrels, (*Thalassidroma pelagica;*) they were taken from Soay on the 8th., and were then about a fortnight old, but very little advanced, being covered with a profusion of down, and their legs and wings quite useless. The old birds were all absent; though we searched every hole, and dug one hole out to ascertain that they were not skulking at the extremity of their burrows, we did not succeed in finding one. The two young captives were placed in a little box, and fed with very small bits of fish, crammed down on the end of a little stick; they took their food in this manner with great reluctance, but I soon discovered that they had a great partiality for cod-liver oil, and would suck a stick dipped in oil very willingly, clattering their beaks and shaking their heads with evident satisfaction. I should conclude from this that the Petrels feed their young with the oil, which they have the power of ejecting from their bills.

The young birds made very rapid progress, and soon became tired of confinement, and were only pleased when allowed to walk about upon the table, though they could not rise off their knees. During the last few days that I had them, they became quite fledged, though still retaining a great deal of wool upon their bodies; and they also became exceedingly active and restless, and very much dissatisfied with confinement in the box. Night and day their long powerful wings were in incessant motion in their attempts to escape from the box. As soon as the lid is opened they raise themselves up until they can hook their bills on to the edge; and then, assisted by their wings and scrambling with their claws, they hoist themselves up. When upon the top of the box, they would be satisfied for a little while, shake themselves, and dress their feathers. The instinctive love of motion, however, would soon return, and they go off on a voyage of discovery.

They walk with great caution, keeping their heads down, and using their bills as walking-sticks, hooking hold of any inequality to assist themselves along, and keeping themselves up, for they have a constant tendency to topple over on their faces: they also are of great service to feel their way, for their sight seemed very imperfect, and their eyes were generally closed. When informed by the bill that they are arrived at the edge of the table, the closed eyes open, and an anxious survey is taken of the depth below; and after considerable preparation and thought, the hazardous leap is taken, and a short flight performed in safety to the floor. These little birds seemed to have an irresistable instinct which led them to attempt to surmount every obstacle which fell in their way. When walking on the table every book and desk must be climbed by means of the hooked bill, with the assistance of claws and pinions. In an angle they would try to shuffle up with their elbows as chimney sweeps used to climb up chimneys; and when upon the floor I have noticed them striving for a considerable time to ascend the wall of the room.

On the whole they were very amusing and interesting pets, and I hoped

to have reared them; but they were very sensitive to cold. One morning I found them both stiff, and apparently lifeless, but the fire recovered them. Last Saturday night, however, was a wintry night; it hailed, and the north wind blew hard; the high hills were covered with snow; and the spirits of the Stormy Petrels departed amidst the roaring Equinoctial storm.

P. S.—On Monday night was another gale, of course, as there were two Petrels.

LETTER VIII.

Iona, October 26th., 1852.

I was disappointed to hear of the Petrels arriving in such bad condition, as I hoped that the post would have taken them quickly enough to prevent their being spoiled. I got another young one from the burrows on the 18th. of this month at Soay Island. It is quite free of down in the upper parts, but underneath he still retains a considerable amount, giving him the appearance of a bird sitting in a nest of wool. The pale bar across the wing is very distinctly marked. He is very active, and can fly perfectly well. At night his wings are in perpetual motion during his endeavours to escape from the box in which he is confined,—so much so that he spoils the appearance of his quill feathers and tail very much; and so I want to send him off as soon as possible, though I should like to keep him till he is quite free of down. I give him a good deal of liberty, allowing him to ramble about the table the whole evening, the favourite time of activity. His habits are similar to those of the pair I last described, except that he is stronger, and capable of more extended flights. When let out of his box he performs a curious exercise—putting his wings into such rapid motion that they cease to be discernible; and although he does not rise into the air, yet he becomes so buoyant that his feet retain no hold of the slippery surface of the table, so that he goes sliding about, backwards and forwards, and round and round, in a very ludicrous manner. This comical minuet generally terminates by his incautiously approaching the edge of the table, and disappearing suddenly backwards.

If you take him up in your hand he always runs up your arm with great swiftness, fanning with his wings till he attains your shoulder or head; this is in accordance with his instinctive propensity to scramble up every obstacle he meets, and never to rest until he has attained the highest elevation within his reach; when this is done he rests contented for a short time, and then throws himself off into the air. I have fed this one almost exclusively on cod-liver oil, which it takes off the end of a feather. His ordinary position, when at rest, is kneeling down, the tail half-expanded, and the wings very much crossed over the back. He generally shuffles about upon his knees, and cannot easily retain his position erect upon his feet, without the assistance of his wings.

As to the quadrupeds of Iona, the list is so short that they are scarcely worthy of much notice.

The Common Shrew, (*Sorex araneus,*) is found, though not numerous. I was going to say that Bats never were seen in Iona, but I recollect on one single occasion, while waiting at a Pigeon cave, after dusk, seeing a solitary Bat flitting about the mouth of it. This is the only one I ever saw either in Iona, or in the adjoining part of Mull, though there are numberless dark caves round these shores. They are very abundant on the mainland of Argyleshire, in the district called Lorn, opposite to the Island of Mull.

The Stoat, (*Mustela erminea,*) is very common throughout the island, living in dry-stone dykes, or holes under rocks. In one of these dens, after killing its inmate, I took out the nest which the little animal had made, consisting of dry grass and sea-weed; there was also a good collection of small birds' feathers, and four or five wings of Ringed Dotterels. These must have been caught when sleeping on the shore. I have frequently seen the tracks of the Ermine over the wet sand at low water. I am not aware whether or not it is common for these animals to take to the water; but I had the following anecdote from a humble friend, who, I believe, could not misrepresent a fact, though he were to try:—He saw a Stoat watching a flock of young ducklings swimming in a pool, and after some hesitation he plunged in, and swimming unperceived among them, caught one and brought it ashore. My friend, the owner of the Ducks, now rushed forward to resent the liberties taken with his property, not in time to save the poor Duckling though, as its throat was cut. Accordingly he threw it in the midden in front of the door, (the usual locality of the dung-heap in the Highlands;) the robber having taken refuge among the stones of a dyke. In a short time he was surprised to see the defunct Duckling moving away, the persevering little quadruped having watched what was done with his prize, and actually returned to appropriate it.

I must conclude rather abruptly, as the postman will begin to indulge in profane expressions, as he is waiting at my elbow.

(To be continued.)

THE WHITE WAGTAIL, (*MOTACILLA ALBA.*)

BY O. S. ROUND, ESQ.

I SUPPOSE there is no common British Bird which has a greater title to elegance than this, he is as familiar as he is pretty, and must really be looked upon as an ornament to our paths and grass-plots His plumage, although only gray, black, and white, is so variegated, as to produce a lively effect; his white forehead and cheeks make a pretty contrast to his glossy black crown and velvet breast; whilst the elegant slope of his long tail with its black centre and white outsides, which is constantly in motion, like any long, flat, thin substance, gives an idea of elasticity and ease to all his motions: this undulating movement it is which gives the name to this genus. Then his long, black, slender legs and bill, and intelligent large circular eyes, contribute not a little to the general effect of his appearance.

He is the smallest bird which runs, and in the beginning of autumn may be seen early in the morning, on the slated roofs of our houses, catching flies which settle there in sunny mornings, or basking in the mild rays. He is usually accompanied by his mate and offspring, which may easily be distinguished from their parents by their gray plumage, as much as those parents themselves may be known from each other by the black chin of the cock, (the hen's being white,) and the much lighter colour of her markings. They seem very sociable birds, and I think do not have a second brood. Keeping together in their breeding parties of five or six, and sometimes more, on newly-ploughed lands and pastures, where they follow about the cattle, feeding on the flies that assemble around grazing animals, which probably also actuates them in the other case, although some have thought they follow the ploughman in pursuit of grubs. They are tame birds, and on these occasions will allow you to approach very near.

Their note is a high chirrup, and beyond this they have no song; but this clear little note sounds very lively along the margins of fresh waters, which they are extremely fond of frequenting, and not uncommonly build their inartificial nests, constructed of dry grass and feathers, and containing usually five white eggs speckled with dark brown, in a hollow of the bank; and from the time that they lead forth their broods, may be seen at all times till nesting-time comes round again, and their parental labours are renewed with the spring of the ensuing year.

There are two other kinds of Wagtails known in England, but they so nearly resemble that species which I have just described in manners and form, that I shall only mention the particulars wherein they differ from it. The first of these is the Yellow Wagtail, (*Motacilla flava.*) This is a beautiful little creature, being somewhat smaller than the white kind, and the cock bird of a brilliant yellow beneath, mixed with grayish green on the upper parts; the hen being both smaller and much duller in her hues. This species is migratory, and only visits us in summer, that is, the mass of them, for very many only perform a partial migration to the warmer parts of Britain in winter. They build their nests and breed in retired places; their eggs much resembling the common species, but somewhat smaller.

The third kind is the Gray Wagtail, (*Motacilla boarula,*) which is a *rara avis* with us; being gray above with a black throat, and partially yellow beneath, and rather larger than the last. I have always had a great deal of doubt whether this is a distinct species or not, for the fact of its combining in so striking a manner, the characteristics of both the other species, is no mean presumption in favour of its being a mixed kind, for I never saw a nest or the bird itself in any number.*

* Since writing the above, which was founded on such personal and hearsay knowledge as I then possessed, I have had opportunities of meeting with the like parties of the Gray Wagtails, old birds and their broods, as in the case of the common Water Wagtail, but I was never able to obtain a nest.—O. S. R.

THE WILLOW WRENS, (*SYLVIA.*)

BY O. S. ROUND, ESQ.

This is a peculiarly interesting genus, forming with the Swallow tribe the most prominent feature in our summer accession of birds. They are at once the lightest, and most airy and pretty creatures that haunt the woods, or flit in the garden, delicate in colour and form, their wild laughing notes ushering in the callow young birds in a most charming manner; and no one, I am satisfied, who has any fancy in his composition, can call the sound to mind without the most pleasing associations of remembrance. Naturalists have made out five kinds of these birds; four more or less common, and the fifth a rare species, called the Garden Warbler. The first of these is an early visitor, and from the note he utters first about Lady-day, on the tall and yet leafless oaks, has obtained the name of the "Chiff Chaff." It is well indeed that he comes so early, for his appearance is not nearly so taking as that of his congeners. He is about as big as a Cole Titmouse, of rather a short make, and of a very dull greyish olive above, and dull white beneath—a very light line passing over his eye. From coming to cheer us so early we have the full value of his joyous voice, and bare woods and dull weather set him off to great advantage.

The next in order come the three Willow Wrens—the Common, Less, and Least. The first must be so well known with his yellowish green upper plumage, and silvery white under parts, that I will not insult my readers by describing him more minutely, more especially as individuals differ nothing in appearance. He seems contemporary with the birch leaves, and flits about them as soon, or even before they can afford him shelter; perpetually in motion from twig to twig, now hanging pendant, now sitting and peering about in quest of prey; he leaves no bud unsearched, no twig uninvestigated; he seems perpetually on the move from morn till night; and as unwearied at his very earliest arrival as if he had performed no journey, traversed no seas, and undergone no hardships of fatigue. His lesser brethren partake of his habits exactly, but I think they are darker and duller looking birds, if indeed we may speak in the plural; for with regard to the Least, there is, I believe, some scepticism. However Bewick, and several other naturalists, have made it a distinct species, and as it has black legs, whilst the others have flesh-coloured, I think they are sufficiently warranted in so doing.

There is another bird so strikingly similar to the Willow Wren that I must class it with them; naturalists call it the Wood Wren, (*Sylvia sibilatrix.*) It is nowhere numerous, but a pair or two are found in most places. The chief characteristics of this species is a slight superiority in size over the Willow Wren, a greater yellowness of plumage, and a greater length of wing —the wings almost reaching to the end of the tail when closed; his manners are also very different, for he is much more sedate and measured in his movements, and instead of the wild joyful note of the Willow Wren, utters

a running full set of notes, which have given rise to his name "Sibilatrix" or "Sibilous." His usual call is a melancholy pea, pea, pea.

The Garden Warbler, which I shall take notice of last under this head, is a very rare bird, and perhaps the more so that he is very difficult to be seen or come at. He possesses the power of mimicry to a great extent, and in this respect treads very closely upon the heels of the Blackcap. I consider them as a sort of link between the Willow Wrens and Whitethroats, as they are not totally unlike either, and I have placed them here for want of a better association. The best description I can give of him is, that if you see a bird which you doubt being a Whitethroat, or hen Black-cap, and at last come to the conclusion he is neither, but exceedingly like both, set him down as a Garden Warbler. I do not think it at all likely however that you will be called upon to decide so disputed a question, for he is not easily found even by those who search for him diligently, and is considered of value in collections. All the Willow Wrens have one mode of nesting, namely, on the ground, and domed or arched over with dry grass and moss, and lined with moss and a little hair, and a feather occasionally. The eggs are usually five or six, white, spotted with red; those of the Wood Wren being the darkest and most spherical. This retreat is generally very well concealed, and if discovered it is not an unfrequent occurrence for the bird to strew loose materials, such as moss, grass, etc., over and around it, so that when you come to the place you may be considerably puzzled to find it. The Garden Warbler builds a nest very much like the Black-cap—deep and partially transparent, of dry grass and horse-hair, and lays four or five dull brown eggs.

The Willow Wrens are certainly a most sprightly race, and fill our woods with as much hilarity as the green leaves do with beauty. The cold autumn weather dispirits them immediately, and they become sad and silent. The all-important and engrossing duties of incubation no doubt take up a great portion of their attention, but they flutter out their little hour very soon, and leave us, as we are chilled by the warnings of winter to the solitude of sound which that dead season cannot but engender.

Lincolns-Inn-Fields, 1853.

RARE BIRDS, ETC., OCCURRING IN ABERDEENSHIRE.

BY JOHN LONGMUIR, ESQ., JUN.

(Continued from Vol. II., page 239.)

White-tailed Sea-Eagle, (Haliæëtos albicilla.)—Not having seen the specimen, to which allusion is made in the July number of "The Naturalist," page 139, which is stated to have measured "fourteen feet from tip to tip of the wings," I had no opportunity, *personally*, of ascertaining whether this was correct. Mr. Alexander Mitchell prepared the specimen, however, and, although he took no accurate measurement of the part, informed me that it could not possibly

have been more than seven feet; and, to shew that the statement is altogether incorrect, I need only refer to such works as the late Dr. Macgillivray's "Manual of British Birds," where the extent of wings in the male is mentioned as being about *six* feet, while the same part in the female is about six feet, eight inches. Had the dimensions given by Mr. Taylor been correct, this bird would have far exceeded the gigantic Condor, which, according to the best authorities, has a spread of about ten feet, and would just have equalled the Albatross!

Pied Flycatcher, (Muscicapa atricapilla.)—As my statement with regard to this bird (Vol. II., page 239,) has been called in question, I may mention, for the satisfaction of the readers of this magazine, that I have been enabled, through the kindness of Mr. Mitchell, to *re-examine* the specimen, which is in his collection, and, by the aid of Yarrell's "British Birds," have had no difficulty in confirming the statement already made, that it is a veritable example of the Pied Flycatcher, the *M. luctuosa* of Gould, Selby, etc., and the *M. atricapilla* of Bewick, Fleming, and Macgillivray. The description given by Mr. Yarrell of a male killed in the spring, agrees with Mr. Mitchell's specimen *in every respect,* with the exception of the under parts, which are dull white, tinged with pale brown. It would be sufficient to state that this specimen was pronounced by the late Dr. Macgillivray to be the species which I have mentioned. This little bird may probably have been more than once overlooked, from its general resemblance to our more common species, the Spotted Flycatcher, (*M. grisola,*) with which it has been observed to associate. The only similarity which I am able to detect between the Pied Flycatcher and the one with which Mr. Taylor *supposes,* (for, since the appearance of my first notice, he has not *examined* the specimen,) that I confounded it, namely, the Black-cap, (*Curruca atricapilla,*) is, that the specific name is the same in both.

Starling, (Sturnus vulgaris.)—From the statement with regard to the occurrence of this bird in our county, one would be led to suppose that the Starling is a rare visitor in Aberdeenshire. This, however, is *not* the case. At certain seasons of the year it is *very common* in the neighbourhood of this city, where it frequently congregates in large numbers, especially about the pools in the links of Old Aberdeen; and Mr. Mitchell mentions to me, that on more than one occasion, he has observed immense flocks near the same locality. It breeds in great numbers in various parts of our county, choosing, sometimes, (as at Keith Hall, the seat of the Earl of Kintore,) high trees in which it excavates a deep hole, from which it is very difficult to obtain the eggs in safety; and sometimes taking up its residence in the ivy-clothed sides of some of the buildings in Old Aberdeen.

Aberdeen, July, 1853.

NOTES ON THE BOTANY AROUND ABERDOVEY.

BY H. C. S.

I PROPOSE in the following notes by no means to attempt an accurate description, but rather a general outline of the Botany around Aberdovey. The flying visit I paid to this village prevented my making any minute observations, allowing me only a cursory glance over the more common plants of the neighbourhood.

The situation of Aberdovey is a picturesque one. Built at the foot of some of the lofty mountains of Merionethshire, it is by them effectually secured from northerly winds; from which circumstance the inhabitants state they never have cold. Immediately in front is the estuary of the Dovey; further to the right Cardigan Bay; to the right and left along the mountains runs the main road, about which the botanist may find much to interest him.

Having thus shown how the place is situated with regard to the cold and heat, that might be expected to retard or favour vegetation, I procced to offer a few observations on those plants I have noticed during my stay.

The slopes of the mountains seem generally covered with coppices of young oak; in such coppices few plants are to be obtained. The Gorse, (*Ulex Europœus,*) seems to occupy the ground, and its being continually cut, and lying out to dry, gives an untidy appearance to the place. In such woods, however, the *Potentilla Tormentilla,* (Tormentil,) and *Lychnis Flos-cuculi,* (Ragged Robin,) grow abundantly. Once I had the fortune to fall in with a very fine specimen of the *Hypericum Androsœmum,* (Tutsan.)

Upon the mountains there are many plants to interest the eye; and more especially the Yellow Mountain Violet, or Yellow Pansy, (*Viola lutea.*) Both the varieties (*α.*) and (*β*) of "Hooker and Arnott" grew abundantly together, and their mingled yellow and purple, (the purple being the *V. amœna,*) present a most beautiful appearance. The thread-like rhizomes of this species may be considered their distinguishing peculiarity; though I have never seen any wild specimen of *V. tricolor* equal, either in brilliancy of colour or in size to the *V. lutea.*

Everywhere and all around you see the *Euphrasia officinalis,* (Common Eye-bright;) it seems a privileged flower, and one cannot be annoyed at its frequency; the higher up the mountain the larger it grows. Here also the *Erythræa Centaurium,* (Common Centaury,) vies with the *Campanula rotundifolia,* (Harebell,) in the frequency of its occurrence. The *Thymus Serpyllum,* (Wild Thyme,) covers every mound; and the *Pinguicula vulgaris,* (Common Butter-wort,) is not unfrequent—I have met with both blue and pink varieties. Every now and then upon these hills you may approach a spongy bog. It is always worth while to examine such spots closely. In one of them I found the following:—*Erica Tetralix,* (Cross-leaved Heath,) *Pedicularis palustris,* (Marsh Louse-wort,) *Epilobium palustre,* (Narrow-leaved Marsh Willow-herb,) *Drosera rotundifolia,* (Round-leaved Sundew,) *Anagallis tenella,* (Bog Pimpernel,)

and last, though not least, the *Scutellaria minor*, (Lesser Skull-cap.) This latter I found scarcely in flower, and though it was evidently abundant in the spot it had chosen for its habitat, still only a few specimens were in flower. Over all these hills the *Erica cinerea*, (Fine-leaved Heath,) and *Ulex Europœus*, (Common Furze,) interwoven, as it were, with the common *Galium verum*, (Yellow Bed-straw,) are the predominant show-flowers.

In descending the heights we come upon an old slate quarry, and here the *Silene inflata*, (Bladder Campion,) *Echium vulgare*, (Common Viper's Bugloss,) *Sedum Telephium*, (Orpine,) *Verbascum Thapsus*, Great Mullein,) with still commoner plants, reign supreme. Upon old walls, *Sedum Anglicum*, (English Stonecrop,) flourishes plentifully. It is an excessively pretty plant, with purple anthers. Every hedge exhibits the *Lonicera Periclymenum* (Common Honeysuckle,) and every hedge-row the *Digitalis purpurea*, (Purple Foxglove,) in great abundance.

On the left hand side, some three miles along the Machynlleth road, is a steep stony embankment. The notice of the passer-by is at once attracted to it by the extreme beauty of the *Carduus nutans*, (Musk Thistle.) This Thistle grows to an extraordinary size there, and its large purple heads make it a most striking plant. Here I found *Linaria spuria*, (Round-leaved Toadflax,) *Galium saxatile*, (Smooth Heath Bed-straw,) *Hypericum humifusum*, (Trailing St. John-wort,) and *H. perforatum*, (Common Perforated St. John-wort,) growing plentifully.

But I must bring my notes to a close by passing hastily over the sand-plains that run along the beach; and, in the first place, the common *Potentilla anserina* must be mentioned. I believe the inhabitants of Aberdovey owe a far deeper debt of gratitude to this simple weed than they have any idea of; and for this reason:—The sands about the village are very shifting, and upon a windy day a *very great inconvenience*. This "silver-weed" prevents *an intolerable nuisance* by binding whole acres together with its wide-spreading rhizomes, and by its soft flat-lying leaves. A fortnight ago entire acres of sand presented the appearance of one vast expanse of the most brilliant yellow—the plant adds beauty to its usefulness. Examining these sand-plains more closely, the little *Glaux maritima*, (Sea Milk-wort,) may be found very plentifully; *Sagina nodosa*, (Knotted Pearl-wort,) is also a common weed. *Across* the Dovey, the sand-hillocks abound with *Euphorbia paralia*, (Sea Spurge;) yet on the Aberdovey side I have not met with a single specimen.

In this hasty sketch I have aimed at conveying merely a general idea of the plants about Aberdovey. I trust I may not have been tedious to any of the readers of "The Naturalist." I am still at work in North Wales, and, at some future time, may send a few more notes of my labour, if "labour" be the correct term for such pleasurable occupation.

Towyn, Merionethshire, August, 1853.

(*To be continued.*)

BRITISH EVERGREENS.—No. 2.

BY J. MC' INTOSH, ESQ.

(*Continued from page* 194.)

THE species and varieties of Holly known in Britain are innumerable, and the multiplicity of names might vie with the Tulip or Hyacinth. The following list, however will be found to contain all that are really worthy of cultivation, and that are really distinct.

Ilex aquifolium, L.—The Prickly-leaved, or Common Holly, Huulver, Hulfere, and Holme; flowers white, appearing in May; fruit red, ripe in September; remaining all the winter on the tree. The lower leaves spinous, while the upper ones, especially those on old trees, are smooth; and are thus beautifully alluded to by Southey, in his pretty poem on the Holly.

> "Its glossy leaves
> Order'd by an intelligence so wise,
> As might confound an Atheist's sophistries;
> Below a circling fence its leaves are seen
> Wrinkled and keen;
> No grazing cattle through their prickly round,
> Can reach to wound.
> But, as they grow where nothing is to fear,
> Smooth and unarm'd the pointless leaves appear."

The following varieties of *Ilex aquifolium* are designated from the various forms of the leaf:—

Ilex aquifolium angustifolium, *Hort.*—The Narrow-leaved Common Holly: Britain.

" " Altaclerence.—The High Clere Common Holly; leaves broad, thin, and flat: Britain.

" " ciliatum.—The Ciliated Common Holly; leaves oval, acuminate, small; the prickles along the margins like hairs: Britain.

" " ciliatum minus.—The Smaller Ciliated Common Holly; leaves smaller, and thinner than the last variety: Britain.

" " crassifolium.—The Thick-leaved Common Holly: Britain.

" " crispum.—The Curled-leaved Common Holly: Britain.

" " calimistrata.—A singular twisted foliage variety; leaves dark green: Britain.

" " Cunninghamii.—A pretty variety with long and narrow leaves: Britain.

" " fastigiatum.—This variety was first discovered near Edinburgh, and about the same time in a garden near Derby: Britain.

" " ferox.—The Fierce, or Hedgehog Common Holly. The disk of the leaf has its edge rolled back with a somewhat cylindrical figure, and the surface of the leaf abounds in prominences and prickles; it has a very singular appearance. Bradley

and Evelyn say that this variety was first planted in the Bishop of London's garden at Fulham, about the end of the seventeenth century, and said by the above authorities to have been introduced from France.

Ilex aquifolium heterophyllum.—The Various-leaved Common Holly: Britain.

" " Hodginsii.—This variety is to be found in the nurseries.

" " latifolium.—Broad-leaved Common Holly: Britain.

" " laurifolium.—The Laurel-leaved Common Holly. The leaves of this well-marked variety are small, oval, lanceolate, without prickles, about the size and shape of those of the Sweet Bay, (*Laurus nobilis.*)

" " latispina.—This variety is also to be found in the nurseries.

" " lutescens. To be found in the nurseries.

" " marginatum.—Thick Margined-leaved Common Holly; leaves without prickles, nearly as round as long: Britain.

" " nigrescens.—This variety is to be found in the nurseries.

" " nobilis.—This variety was first sent out by Urquhart and Sons, of Dundee; by some considered the same as *Hodginsii*, but quite distinct.

" " pendula.—Weeping Common Holly. This is an addition of no ordinary character to our weeping trees, so few of them being evergreen. It was first found growing wild in Dalkeith Park, near Edinburgh; yet according to a Mr. Joseph Good, in "Gardener's and Farmer's Journal," the history of this variety is as follows:—"Mr. Jessop remarked to the late Mr. Loudon, who was at that time engaged in laying out the arboretum at Derby, that he could show him a Weeping Holly, to which Mr. Loudon replied, there was no such thing in nature. Such a tree does, however exist, and from Dr. Heygate, of this town, (Derby,) I learn the following particulars respecting it:—Dr. Heygate's residence has been built about eighty years, and about the same time a number of Hollies, of various kinds, were planted about the grounds; many of them are now from twenty to thirty feet high, and amongst them stands the weeping plant in question. It is at the present time, 1850, twelve feet high, and about fourteen feet in diameter; though much smaller and more spreading than the others; it is equally thick in the stem, and appears to have been planted at the same time." This desirable variety is now common in every nursery of any note, and in many private gardens; in those in which it does not exist, we strongly recommend its introduction.

" " platyphyllum.—This is a broad-leaved distinct variety, with smooth foliage, and of a dense and robust habit: Britain.

Ilex aquifolium Pyrifolium.—The Pear-leaved Common Holly. As its name denotes, this variety is destitute of prickles, smooth and dark green: Britain.

" " recurvum.—The Recurved-leaved Common Holly: Britain.

" " rosmarinifolium.—This is a curious variety, with small and narrow leaves.

" " Sheppardii.—This is rather a distinct variety, raised, we believe, near Sheffield, with large foliage, which occasionally has a purple tinge.

" " serratifolium.—Serrated-leaved Common Holly: Britain.

" " senescens.—Aged Spineless Common Holly: Britain.

" " tortuosa.—This variety is to be found in the Taunton nurseries.

The following varieties of *Ilex aquifolium* are known by the size and markings of their leaves, of which their are numerous varieties; but the following appear to us to be the most distinct:—

Ilex aquifolium variegatum.—The Variegated-leaved Common Holly.

" " albo-marginatum.—White-edged-leaved Common Holly.

" " albo-pictum.—White-spotted-leaved Common Holly; known also by the name of Milkmaid; this is certainly one of the most beautiful of all the variegated Hollies.

" " aurco-pictum.—Golden-striped-leaved Common Holly.

" " aureo-marginatum.—Golden-edged-leaved Common Holly.

" " calimistrata variegata.—A singular twisted foliaged variety, with yellow blotched leaves.

" " ferox-aureum.—Gold-blotched Hedgehog-leaved Common Holly: this variety and the following are beautiful Hollies.

" " ferox argenteum.—Silver-blotched-leaved Common Holly.

The following varieties are known from the colours of their fruit or berries, which in the autumn months are very beautiful:—

Ilex aquifolium fructu-albo.—White-fruited Common Holly.

" " fructu-luteo.—Yellow-fruited Common Holly.

" " fructu-nigro.—Black-fruited Common Holly.

Of the species known of *Ilex*, the following may be enumerated as distinct and deserving of notice:—

Ilex angustifolia.—The Narrow-headed Holly. This is an evergreen shrub from six to ten feet high, found in deep swamps from Virginia to Georgia, and first introduced in 1806; flowers white, berries red.

" Asiatica.—This species is a native of the East Indies.

" Balearica.—The Minorca Holly; a very distinct variety of the Common Holly, being readily distinguished by its yellow green leaves. It is, however, only considered as a variety of *I. aquifolium* by some.

" bumelioides.—This species is a native of Peru.

" Cassine.—The Cassine-like, or Broad-leaved Dahoon Holly; leaves oval, lanceolate, sharply-sawed, and flat; an evergreen low tree from

eight to twelve feet high, a native of Lower Carolina and Florida in shady swamps, introduced in 1700; flowers small, of a yellowish white, and are produced in August. The leaves and young shoots are used by the Indians for the same purpose as those of *I. vomitoria* and *I. Dahoon*. This is also the *I. Caroliniana* of Mill. Dict., No. 3, and the *I. Cassinoides* of Link. Under these two names they are frequently sold as distinct species, though one and the same.

Ilex castaneifolia.—Chesnut-leaved Holly.

" Canariensis.—The Canary Island Holly; leaves ovate, lanceolate, rather acute, entire, glossy; fruit black; introduced in 1820.

" Chinensis.—(Bot: Mag:, 2043.) Native of China, introduced in 1814; an evergreen tree about twenty feet high.

" Cornuta.—Horned leaved Holly, native of the North of China; introduced by our friend Mr. R. Fortune, in 1849. The leaves are deep green, leathery, oblong, roundish at the base, and end in three strong spines at the apex; while the plant is young there are added one or two more on each side. In old plants these disappear, while the end spines will occasionally extend, turn up their edges, and assume the appearance of strong horns.

" cornuta furcata.—This is another introduction from China, by Mr. Fortune, and although only a variety of the preceding, is perfectly distinct, and is altogether a fine plant.

" crocea.—The Saffron-flowered Holly; native of the Cape of Good Hope; introduced in 1794.

" cuneifolia.—A native of North America, of which little is as yet known.

" crenata.—This species is a native of Japan.

" Dahoon.—The Dahoon Holly, a beautiful evergreen shrub from six to eight feet high, found in the open swamps from Carolina to Florida; introduced in 1726. Flowers in May and June; leaves, lanceolately elliptical, nearly entire, almost revolute in the margin, resembling those of *Laurus Borbonia*. In America the leaves are used for the same purpose as those of *I. vomitoria*, (which see.)

5, *Middle-Street, Taunton, Somerset, July*, 1853.

(To be continued.)

Miscellaneous Notices.

Note on the maternal affection of the Otter, (Lutra vulgaris.)—An instance of maternal affection in the Otter worthy of record, occurred here a few years since. A coast guardman, in his round of duty at night, came upon three young Otters in a lane leading to the beach, and gave chase; throwing his stick at them, he struck and stunned one, the other two escaping through a gutter-hole. On taking it up it soon came to, and began to squeal, which presently brought the old one to its assistance. She kept just before him, out of reach of his stick, and in this way retreated down the beach, whilst he held the young one in one hand, and endeavoured to strike her with the other. The poor animal now took to the water, and he enseoneed himself

behind a rock, and again made the young one cry, when she came ashore, and approached near enough to receive a blow on the head, which put an end to a solicitude for her young deserving of a better fate. I saw them both, and had the account from the man next morning.—Clement Jackson, East Looe, July 16th., 1853.

Occurrence of the Great Shrike, (Lanius excubitor,) *near Hackney*.—On my return home from a day's shooting last December, I shot a fine specimen of this bird in Pond Lane, Clapton, Hackney.—B. Hesse, 9, Hertford Road, Kingsland, June 16th., 1853.

The Dartford Warbler, (Melizophilus Dartfordiensis.)—A fine specimen of this bird was shot on the 10th. of November, 1852, on the Hackney Marsh, near the East London Water Works. —Idem.

The Dipper, (Cinclus aquaticus.)—The following instance of the pertinacity with which the Water-Ouzel or Dipper rebuilds its nest after it has been several times destroyed, lately came under my notice; and judging that the account may prove interesting to some of your readers, I here give it as briefly as I am able, knowing that your pages must be occupied by more valuable matter:—On the 26th. of March, 1852, a nest of the Water-Ouzel was found under the arch of a small bridge, which is crossed several times every day by a railway train. Five eggs were taken from it, and the nest itself pulled down. About three weeks afterwards another nest was built on the same place, and this also was plundered and destroyed. The bird built for a *third time*, about the second week in May, and this time was allowed to bring up her young in safety. On the 1st. of April of this year, a nest (built in all probability by the same bird,) was discovered under the bridge, and was robbed of its eggs. A second time did this indomitable bird raise her ill-starred nest, and a second time was it torn to the ground; and on May 5th. she was observed to be making preparations for her third nest in as many months. —H. S., Richmond, Yorkshire, June 8th., 1853.

The Starling, (Sturnus vulgaris,) *and Jackdaw*, (Corvus monedula.)—Whilst on a birds'-nesting expedition a short time ago, in an old ruin near this town, a *Starling* was seen to fly out from a hole, about twenty feet from the ground. A ladder was procured, and on mounting to the hole, a *Jackdaw* also flew from it, and the nest, on examination, was found to contain four Jackdaw's eggs, and one of the Starling. The latter was placed in the centre of the nest, with the eggs of the Daw touching it on every side. Could any of your correspondents explain this strange circumstance?—Idem.

Additional Heronry.—I am able to add another Heronry to the list published in "The Naturalist;"—the one I allude to is at Bulwick, in Northamptonshire, and is the property of J. Fryer, Esq. It is situated in a long wood, near to a large pond of water, in the middle of fields. This pond is tenanted by numbers of Moorhens, Coots, and Wild Ducks, with several specimens of the Little Grebe and Common Snipe; about a hundred yards from this lies the wood, through which a green "riding" leads up to the Heronry. The nests are placed in high oak trees, about the same elevation as Rooks', to which they bear no slight resemblance. On proceeding quietly along the birds may be seen, if it is in the breeding-season, sitting on their nests. On being disturbed, they glide silently off and fly round and round overhead, uttering at times a sort of harsh scream. The young ones keep up an incessant noise, like the sound of a hammer when struck on a piece of wood. As far as I can remember there were about thirty couple when I was there last; but as some time has elapsed since I had the opportunity of visiting it, I cannot speak with accuracy.—T. G. Bonney, Rugeley, Staffordshire, July 21st, 1853.

Kingfisher's Nest, (Alcedo ispida.)—I took a nest, containing five eggs, last June, in a hole in a bank of the River Trent. The hole was about two feet and a half long, and about the width of my arm; at the end it expanded so as to form a ball-shaped chamber, the floor of which was below the level of the gallery. This chamber was neatly lined to the height of the gallery floor with a layer of small fish bones, on which the eggs were laid. Owing to the neatness with which this was done, and the freshness of the eggs, I cannot but think that these bones were placed there before the eggs, and that the Kingfisher does make a nest. I have inspected other nests in former years with a like result.—Idem.

Ornithological Captures in the Neighbourhood of Plymouth, from December, 1852, to April, 1853.

December 27th., 1852.—During a heavy gale a specimen of the Fork-tailed Petrel, (*Procellaria Leachii*,) and Brown Skua, (*Cataractes Skua*,) were picked up in an exhausted state on the rocks of Plymouth Sound. January 15th., 1853.—A fine specimen of the Puffin, (*Alca arctica*,) was captured. The occurrence of this species on our coasts in *winter* is very uncommon. On the 29th. of the same month, the Ringed Guillemot, (*Uria Lacrymans*,) was obtained on the River Tamar. April 26th.—A male Continental Wagtail, (*Motacilla alba*,) was killed by myself at Laira, near Plymouth; and on the 29th., a female Golden Oriole, (*Oriolus galbula*,) was shot in the neighbourhood of Mount Edgcumbe. Its stomach contained the remains of caterpillars, flies, and the stones of berries. The above-mentioned birds were all preserved by Mr. Bolitho, Taxidermist, Plymouth. I have met with many specimens of the Black Redstart, (*Phœnicura tithys*,) in our neighbourhood during the past winter.—John Gatcombe, Wyndham Place, Plymouth, June 24th., 1853.

Song of the Blue Titmouse, (Parus cæruleus.)—With reference to the singing of the Blue Titmouse, noticed by my brother in a recent number of "The Naturalist," I have to add that very soon afterwards I heard one singing, for the first time that I ever observed it to do so, close to my study window; and a short time afterwards I heard another singing on the wing, in flying from one tree to another. It was a very low, very soft, and very sweet warble.—F. O. Morris, Nafferton Vicarage, Driffield, August 29th., 1853.

Testacella Scutulum, ("The Naturalist," vol. iii., page 179.)—Knapp, in "The Journal of a Naturalist," at page 353, Fourth Edition, 1838, makes the following statement:—"An extraordinary Snail, (*Testacellus haliotideus*,) is now spreading by transplantation in many places, and may hereafter occasion inquiry." To this statement is appended the following note:—"This creature was first observed, I am told, about the year 1819, in the nursery-garden of Messrs. Miller and Sweet, near Bristol, introduced, as is supposed, on some imported plant. It increases readily in our climate." The nursery-gardens above-mentioned have since passed into the hands of Mr. Garraway, a most generous and liberal-minded man. In 1843, while residing at Tenby, I saw a specimen of this slug, which in appearance, so far as I can remember at this distance of time, resembled the description given by your correspondent, Mr. J. Mc' Intosh, of the *T. Scutulum*. It was found in the kitchen-garden attached to the house, at present the property of Colonel Wedgwood, of Tenby. Knowing this Slug had been found in Mr. Garraway's nurseries, I was disposed to conclude it had been introduced into the garden I have mentioned at Tenby, in the mould attached to the roots of plants supplied by Mr. Garraway. It may be interesting to some of your readers to see Mr. Ball's statement as to the feeding of this Slug on worms.—"I first became aware of this *Testacellus* preying on worms by putting some of them in spirits, when they disgorged more of these animals than I thought they could possibly have contained: each worm was cut, but not divided, at regular intervals. I afterwards caught them in the act of swallowing worms four and five times their own length. Some of these *Testacelli*, which I brought to Dublin, and put in my fern-house, produced young there."—An: of Nat: Hist: vol. vi., page 20.—R. Wilbraham Falconer, M. D., Bath.

The Death's Head Moth, (Acherontia Atropos,) *at Louth*.—On the 28th. of June, I had a fine specimen of the Death's Head Moth brought to me, which had just been captured under the cover of a bee-hive in James-Street, Louth.—John Brown, Louth, July 1st., 1853.

White Variety of Prunella vulgaris.—Some years ago I found a white variety of this common plant in the parish of Alvah, Banffshire, North Britain. The normal colour of the corolla is violet blue. I am not aware of this *lusus naturæ* having been previously observed or recorded. Although the fact is in itself of little importance, it is not without interest to the botanist. —J. Rose, M. D. R. N., Haslar Hospital, Gosport, April 8th., 1853.

Reviews.

A Naturalist's Rambles on the Devonshire Coast. By Philip Henry Gosse, A. L. S., Author of "The Ocean," "A Naturalist's Sojourn in Jamaica," etc. London: John Van Voorst, 1853. p. p. 451. *Numerous Engravings.*

A compulsory residence in Devonshire for the recovery of health was turned to good account by Mr. Gosse, in the production of this extremely interesting and useful volume, and which will, we trust, lead many to the study of the numerous wonderful and elegant forms that are to be met with on every coast.

The author does not profess to give a book of Systematic Zoology, but rather the somewhat desultory observations suggested by objects as they presented themselves to his view; and he has done this in an extremely interesting and useful way. Having a good achromatic microscope with him, he has brought it to bear with admirable effect on the minute creatures which abound on all our shores. Many of these he has followed through all their stages of growth, and in doing so has added largely to the general stock of knowledge. As an example of the style and value of the book we may take the following:—

METAMORPHOSIS OF LEPRALIA.

June 11*th*.—I detached a minute atom of a red colour swimming rapidly in gyrations in the water in which were fragments of polypiferous rock. I caught it with a tube and examined it. It was a globose, or rather semi-elliptical body, of a soft consistence, covered on its whole surface with strong bristly cilia, in rapid vibration. Near the rounder end was evidently an orifice with amorphous lips; and when the globule was submitted to slight pressure, just sufficient to confine it, it made great efforts to get away by slightly lengthening itself, and drawing in the sides around this mouth, which was in a manner protruded forcibly and repeatedly. Presently on the restraint being continued, the globule threw out from different parts of its periphery, long lancet-like flexible pointed bristles twice as long as the cilia, with which it pushed here and there. These lancets I perceived were ordinarily bent at an acute angle near their base, so as to lie flat on the body unperceived; and I think there were many of them, for I fancied I saw the minute basal parts of many that were so concealed. Those that were exposed were ever and anon suddenly bent up again and so concealed, and again protruded. After examining it awhile, I carefully put it without injury into a glass of sea-water alone. Its diameter was about one hundred and tenth of an inch. (See Plate XIII., Fig. 1.)

I afterwards saw another in the original vessel, and both this and the former had the habit of coming into contact with the side of the vessel, and continuing in one spot for a considerable while, (half an hour or more,) not moving a hair's breadth from the place, and yet evidently not adhering, because gyrating uniformly all the time by the ciliary action. One of these I lost, and the one that I isolated got into a corner of the cell, and decayed. But carefully looking at the original vessel, I found some half-a-dozen scattered over the sides, but in a more advanced condition. These were all firmly adhering to the glass, and that so inseparably that the most careful touch of a pin's point to detach one, tore it into a shapeless mass of broken flesh. The youngest of these had taken the form of a flattened oval, or long hexagon, with one end more pointed than the other, in which the redness was curdling and separating into masses. The others showed eight points budding from the more acute end; and in one the most advanced, these were already produced into eight slender spines, set around the end like the teeth of a comb, and slightly divergent. In this the general hue was a pale pellucid flesh-colour; and an opaque band of deep red was arranged in a horse-shoe form around the end opposite the spines. (See Fig. 2.)

During the next day little change took place, except the lengthening of the spines; but by the following evening, forty-eight hours after I had observed it in the state just described, (Fig. 2,) it had made important advances. The spines, without increasing in thickness, had shot out,

until the middle and next pair were nearly as long as the transverse diameter of the body; the other two pairs were much shorter. A touch with a pin broke short off two of these, proving that they were very brittle, whence, and from their crystalline appearance, I infer their calcareous or siliceous nature. But while I was examining it I was surprised to observe a bundle of filaments among the spines, and much resembling them, except that they were bent irregularly, and slowly moved among themselves, while the spines were fixed. Lo! the bundle is gently protruding, and presently the whole is withdrawn like lightning out of sight into what I can no longer hesitate to call the oval *cell*. A simultaneous jerk in the contents of the cell set me upon trying to make out the form of these, in which, notwithstanding the confusion of the parts, I had already traced (or fancied) the body of an ascidian polype, doubly bent up, like that of a *Membranipora* or *Flustra*. By careful watching, during many protrusions and retractions, I was enabled to make out this with sufficient distinctness; though some portions of the area were still semiopaque, and therefore obscure. I could see also an ample aperture on the surface opposite to that at which I was looking; (viz. the adhering base, for as it was in a glass vessel, I could apply my microscope only to the outside, and therefore only saw it through the glass to which it had attached itself;) this aperture on the upper surface was excentral, and situated on the half nearest the spinous end. Possibly this aperture was covered with a membrane, (like that in *Cellularia avicularia*,) for I think that the bundle of tentacles were not protruded through it, but through an orifice more terminal, yet still above the plane of the spines. The body of the polype, of a horny yellow hue, was doubly bent to one side, and behind the angle was an irregular transverse mass of deep red matter, and another small spot of the same was a little on one side of the centre. These were all the remains of the scarlet substance left. (See Fig. 3.)

On the morning of the third day I found the polype perfectly formed and well expanded, a circle of thirteen tentacles; these were usually protruded in the form of a funnel, with the rim so slightly everted as scarcely to entitle it to be called a bell, but now and then they were momentarily spread out quite flat so as to make a beautiful plane star, the tips forming a regular circle. I could now distinctly see the intestinal tube, which is inserted into the stomach low down in the body, and proceeds nearly parallel with it to the aperture. The body of the polype is considerably protruded from the cell, below the divergence of the tentacles. The great circular aperture on the upper surface, appears to have a rim. (See Fig. 4.)

June 18*th*.—A week old: no material alteration from last record. I found, however, the next day a gemmule, represented at Fig. 5, which perfects the series. It was in a state intermediate between Figs. 1 and 2. Its length is one-seventieth of an inch. The edges are pellucid, and have an appearance of radiating fibres. The redness is curdled, but not wholly separated. This continued for several days, the red mass slowly concentrating; but no spines appeared; and at length I fear it was broken accidentally; granular matter came out, leaving a glassy cell attached to the side of the vessel. The species was probably *Lepralia coccinea;* but eight spines are more than are ascribed to any of our species."

His observations on Marine Vivaria are extremely interesting, and the idea has lately been carried out with singular success in the Zoological Gardens, Regent's Park, London. We have often indulged a hope of carrying out some similar plan, but circumstances have hitherto stood in the way.

The facts which Mr. Gosse has recorded in this volume are not confined to one branch of Natural History, but embrace all that one may reasonably expect to find illustrated at the sea-side.

Many curious forms are now described for the first time, and numerous additions made to our knowledge of the economy of others, and the descriptions are aided by twenty-eight plates, several of them coloured. We regret that we are unable to devote more space to this deeply interesting volume, which we cordially recommend to our readers, whether living on the coast or elsewhere. Those who have the opportunity may verify Mr. Gosse's observations;

and those who are debarred from that pleasure may still form a very agreeable idea of what may be seen on the sea-shore, and may easily imagine themselves in company with some of the strange forms which are so graphically described.

The moral tone of the book too is so healthy, that were it on this ground alone, we should be very glad to see it in very large circulation; and while from its correctness it is suited to the advanced naturalist, its simplicity would strongly recommend it to the young.

The Sea-weed Collector's Guide; containing plain instructions for collecting and preserving, and a list of all the known species and localities in Great Britain. By J. Cocks, M. D., Devonport. London: Van Voorst, 1853. p. p. 120. *One Coloured Plate.*

This little book has been written by Dr. Cocks to supply a want very generally felt for more detailed directions for preserving Algæ than are to be found in any of the little treatises previously published.

In the first chapter will be found some useful general information on the nature and structure of Sea-weeds; and in the second the author enters fully and plainly into the best modes of collecting, setting out, and preserving specimens of the various kinds of Sea-weeds. The following short extract will give some idea of this portion of the work:—

"After gathering our plants, the next point to be attended to is to give them a good washing before leaving the shore, either in the sea or in some of the pools left by the receding tide, removing from them, at the same time, as far as may be practicable, all fragments of decayed sea-weeds, and other extraneous bodies, such as particles of sand and gravel, portions of the softened surface of sandstone or argillaceous rock on which the plants have been growing, together with the smaller Testacea, &c., &c.

When gathering our plants, however, it cannot be expected we can devote any considerable portion of time to this cleansing, our principal object being to collect, and remembering that we shall be compelled to relinquish our pursuit soon after the tide begins to flow; for, after all, on our return home, it will be found there is still a great deal of work to do before the specimens are in a fit state to be finally committed to paper, since foreign substances will still remain attached to them with much pertinacity even after we have supposed them to be perfectly clean."

The third chapter is devoted to the methods of identification of the Algæ by the microscope, and also to some very useful instructions in the best ways of preparing and mounting them for the microscope. This portion of the book will be found very valuable, for the microscope is essentially necessary to enable us to recognise, with certainty, many of the more delicate Sea-weeds: without it we are all uncertainty, with it mistake is almost impossible.

The next part of the book is occupied with a list of all our native species of Sea-weeds, with descriptions of the Orders and Genera; and the whole concludes with an alphabetical index of the species, with localities, which will doubtless prove of much assistance to collectors.

To any one who wishes to preserve his Sea-weeds in the best manner, this little book will be of the greatest assistance.

The Retrospect.

Note on the Stoat and Weasel.—In page 138 of "The Naturalist," J. M. Jones, Esq. mentions having shot a White Weasel, (*Mustela vulgaris,*) and appends an accurate description of a frequent appearance of the Stoat, (*M. Erminea,*) which is at all times readily distinguished by its tail ending in a black brush; whilst its congener, the Weasel, has it invariably short, tapering to a point, and brown; such at least has been the case with all the numerous specimens of each brought to me during a twenty-five years' practice of Taxidermy; and although the Stoat is frequently white, or patched brown and white, all the Weasels have been uniformly marked, differing only in shade, except one, which had a white collar round its neck, and white fore-legs. This shews a great permanency of colour in the one species, whilst the other so frequently changes, even in our climate, and in the absence of any admeasurement to decide, induces a belief that the specimen above-mentioned must have been a Stoat.—Clement Jackson.

The Querist.

On the sea shore betwixt Peterhead and Fraserburgh, and near to a place called Ratteray, a number of Terns, about the size of the common species, breed every summer. On an island in the Loch of Strathbeg, in the same locality, a number are also known to nestle in company with the Black-headed Gull, (*Larus ridibundus.*) Both appear, that is at a distance, to be very like each other; but those that frequent the sea shore only scrape *a hole* in the sand, into which the female deposits her eggs, without the least attempt at *forming a nest;* whereas those that breed on the island *build a regular nest*, similar to, and with the same sort of materials, as that of the Gull already mentioned, but of course not near so large. The eggs of those that breed on the island appear to me to be *somewhat less* than those that do so on the sands. Both species, that is if they are distinct, breed at the same time. Now will any of the readers of "The Naturalist" be kind enough to inform me, either through its pages or by post, *if these Terns are the same?* and if so, the reason why the one party should build a house for their future progeny, whilst the others do not? Or why the one should affect a grassy island, and the other the bare sand on the beach, as there is on either ample room for all and to spare? It might also be that some kind-hearted reader, who may be better informed on the subject than myself, will take the trouble to intimate if *Palinurus quadricornis* be often found in our seas, and if so, in what localities?—Thomas Edward, 16, High-Street, Banff, August 16th., 1853.

Could your correspondent, Mr. Brown, who so obligingly answered my questions in "The Naturalist" for last month, increase my obligations to him by informing me in what particulars the eggs of the "Lapwing" and those of the "Golden Plover" differ?—H. S., Richmond, Yorkshire, June 8th., 1853.

Without being able to account for the difference in colour and markings of the chrysalides of the Swallow-tail Butterfly, described by the Rev. F. O. Morris, (see "The Naturalist," vol. iii., page 160,) I may mention having had caterpillars of the Red Underwing Moth, (*Catocala nupta,*) which greatly differed from each other in appearance. It is now some few years since I met with them, and in describing them from memory, I may not be able to give a perfectly accurate description of them, though I do not imagine I shall err very materially. I am confident that the difference between them was as great as there will appear to have been from the description I am about to give; it was so great that I could not have believed it possible that they belonged to the same species; that they did, however, I had the most conclusive evidence, having kept them till they passed through the chrysalis state, and into that of the perfect insect. As nearly as I can recollect, one of the caterpillars was of a greyish brown colour, without stripes, but having a flesh-coloured tubercle on the back about the middle; the other was of a much darker ground colour, with reddish stripes, and without any kind of tubercle. This species is very abundant in this locality, from the profusion of willows growing here, upon the leaves of which the caterpillars feed. I once caught seven specimens of the perfect insect in my hat at one sweep, as they were hovering in the twilight round the trunk of an elm; upon the saccharine matter, contained in the sap of which, they seem to feed, as Butterflies and Sphinges do upon the nectar of flowers. Both caterpillars and chrysalides of many Lepidopterous Insects vary in size in the two sexes, but do they also vary in colour and markings from this cause?—Samuel Stone, Brighthampton, July 20th., 1853.

BRITISH MUSEUM NATURAL HISTORY

BRITISH MUSEUM NATURAL HISTORY

INSTINCT OF ANIMALS.

BY O. S. ROUND, ESQ.

In a former paper, (ante vol. ii. page 203,) I took occasion to advert to an extraordinary instance of sagacity in a pet Dog, whose intelligence was remarkable; and to observe generally how very nearly, what we commonly term "Instinct" approaches to reason. I have always studied the manners and habits of all wild animals with great attention, and I think it will not be denied by those who have turned their minds to the subject, that although in the great majority of instances, they obey a natural impulse blindly, yet, that an all-wise Creator has likewise endowed them with a limited reasoning faculty to the extent of being enabled to obviate a difficulty occurring to mar the performance of the function to which the instinct excites, or to preserve or further the maintenance or performance of a natural endowment; nay more, I would further advance that this is not confined to wild animals alone, but to man in a wild state. The most familiar instances of instinct, with this additional superadded power, occur in the preservation of the individual. Thus a hunted Deer will by every possible shift conceal himself to the last moment from the sight of the pursuing pack, because scent, however keen, will never enable them to run with the swiftness of sight; it may be said that the mere natural timidity of the creature prompts to this; however it may be, I need not remind those who are acquainted with the chase, with what extraordinary address hunted animals endeavour to elude pursuit. Look at a Rabbit, which by fair running, is easily caught by an ordinary dog, but this he never resorts to, although for a short distance his powers of speed are, perhaps, unequalled, but he likewise possesses a qualification far more valuable—he can, when in full speed, stop in a moment, and *dodge* his pursuer; and in this way, where there is the least cover, he scarcely ever needs to resort to his burrow.

This reminds me of an extraordinary instance of adaptation to circumstances, of which my brother was a witness. I was walking in our grounds with my gun in my hand, when suddenly, as our little dog was hunting in the Fern, what I took to be a black Cat ran before me, but on looking again, I perceived it was a Rabbit quite black. By this time I suppose he was fifty yards or more from me, however I fired, but I believe did not harm him. Of course he was a prominent object in the bright green herbage, and we gave chase, but having a long start, our dog could not overtake him, but ran him by scent into a hedge. I then handed the gun to my brother, and watched for his exit, when suddenly he cautiously emerged from the hedge upon some ground which had been lately cleaned, and upon which blackened heaps of burned weeds still remained, and to my astonishment, and no less amusement, proceeded at once to the nearest black mass and curled himself up beside it. I beckoned to my brother, and we walked up and shot him, and I kept the skin for some years. Now this was assuredly going far beyond

mere instinct, and I think a fair illustration of what I at first advanced.

All animals and birds of game so nearly resemble the herbage amongst which they are found, that this is undoubtedly a natural provision for their protection; and this is carried out likewise in the gorgeously-plumed daisies of tropical countries, where the ordinary floral productions of the field and garden act very much to them, as the dead fern-brake or brown heather does to our Hare or Partridge. It is notorious that the Mango-Pigeon of Hindoostan so nearly resembles the leaves of the Mango-Tree, as to be quite undistinguishable as long as he is still; and in our own country the Wry-neck is to a casual observer but as a portion of the bark of the moss-grown tree upon which he rests.

I knew a gentleman who had so tutored his Dog, that in walking through his woods where snares were set for Rabbits, it would always avoid them, and even stop suddenly and run on one side where a trap was concealed in the earth, which no human eye could detect, and this I believe is not uncommon. With Insects I have observed the same thing, more especially with Spiders; some of these creatures have a retreat, as it were, at the upper corner of their web, from which they await the entanglement of a victim; but others, and those of the larger kinds, hang motionless and extended in the centre, but approach them, and they immediately retreat and conceal themselves. There is one large brown kind especially, common in heathy districts, which retreats on the least alarm, and crouches beside a dried pod of Gorse seed, to which he bears so remarkable a resemblance as to be undetectable, if I may coin a word, from it. Again, there is a pink kind which exactly resembles a single flower of Biennial Clover. He ensconces himself in a full-blown head of this plant, and woe betide the unlucky Butterfly who unconsciously endeavours to sip nectar there! There are likewise bright green Spiders for cabbages, and so on; and hence in this wonderful system of Nature we see so much to admire and reverence, that we are lost in wonder and adoration.

Rise from this to the highest objects of creation, and see the Caffre chief in his red wool blanket lying beside the sand hillocks, and a regiment might be in the midst of thousands and take them either for sheep or lumps of earth; his skin is also as nearly as possible of the same hue. Of the wiles of the American savage we have often read; and thus we trace from majestic and reason-endowed man the chain which connects reason and brute cunning, even to the very Insects which we trample unknowingly beneath our feet.

Lincolns-Inn-Fields, September, 1853.

NOTES ON THE BIRDS OF IONA.

BY HENRY D. GRAHAM, ESQ.

(Concluded from page 167.)

Cormorants, *(Phalacrocorax.)*

"The Cormorant," or, as we commonly call it, the Scart, or *Scarble*, (for, like much of the low country Scotch dialect, it is a corruption of the latter or pure Gaelic word,) is abundantly distributed along our shores, and over the surface of our seas—both the Great Black Cormorant, (*Phalacrocorax carbo*,) and the Lesser Green-crested one, (*Phalacrocorax cristatus*,) though the latter the more plentiful of the two.

The caves of Staffa, and of the neighbouring islets, are exclusively peopled by this kind; while beneath the stupendous cliffs of Burg and Gribun, on the mainland of Mull, the Black Cormorant is found in great numbers nestling and roosting among the wave-worn caverns. The habits of the two species seem to be very similar, and I am not aware of any reason for their thus selecting these separate localities.

At a distance the Black Cormorant is easily distinguished by the marked white patches underneath, which contrast very conspicuously with the rest of its black plumage. The Green Cormorant, on the contrary, has no break in the sombre tint of its sad-coloured livery, with the exception of the bright yellow skin upon the face, which is, however, sufficient to betray the bird when sitting—otherwise quite invisible—upon the high ledges in the twilight obscurity of its cave.

The crest is another distinction between the two races, though in itself rather an uncertain criterion; for while the Black bird often has it partially developed, the Green-*crested* one is not always thus ornamented, even in birds actually shot on the nest in the height of the breeding-season; though in winter I have, on the other hand, once or twice got individuals with a magnificent long *queue*. But in general it must be regarded as a nuptial ornament, and a very graceful one, of the adult Green-crested Cormorant, when attired in his rich and beautiful wedding garment of summer.

The immature Black Scart takes more than one season to attain its full bulk, and its plumage in the meantime is dull black above, and a greyish brown mixture beneath; but the young green one is clad in an entire neat suit of dark bottle green, from the very commencement of its career after leaving the nest. Another distinction may be observed in the eyes, for those of the last-mentioned species are of a brilliant clear green, like lustrous emeralds, while the irides of the other are simply grey or brown.

Many people feel a sort of aversion to the Cormorant as a kind of *unclean* bird. It certainly has an ugly name for greed and gluttony. Milton

supposes Satan to have entered its form before assuming that of the Serpent to betray man.—

> "Thence up he flew, and on the tree of life—
> The middle tree, and highest there that grew,
> Sat like a Cormorant."

Indeed the sepulchral gloom of its dark, dank abode, its sombre plumage, melancholy aspect, its silence but rarely broken, and then only by a sad foreboding croak, might all join to inspire a sort of prejudice against the poor bird, independent of its rather dirty habits. And truly his cave does not smell savoury; even the well *whitewashed* rock, out in the open sea, where groups of these grave-looking citizens of the deep sit and sun themselves on their return from the fishing business. When approached to leeward, a breeze is borne down upon us, very unlike what is wafted off the balmy spice islands, but rather such as we should expect from a city of Esquimaux, when holding high wassail, in brimming beakers tapped from a stranded Whale.

But, after all, this bird will be found to be as beautiful a work as any Nature has turned out of hand. Its shape and long neck are far from inelegant. See it dive!—how gracefully it springs clean out of the water, throws a summerset in the air, and disappears head foremost into the blue depths! Then the lovely plumage of the Green Cormorant—a mixture of green and gold, like the most gorgeous shot-silk raiment, traversed by delicate bands of rich velvet: its beak of gold, and its eyes living emeralds. He also bears a plume upon his head as a mark of his nobility.

From this high cliff we look down upon the vast heavers of the angered ocean, as they come rolling in with mighty sweep to hurl themselves upon the iron-bound shore; all around is milk-white foam, and dreadful agitation; there in the very midst of this, what Byron would call *Hell broth*, floats a black speck,—that is the Cormorant, following its sport where the stoutest work of man's hand would be as a toy—where all his skill and inventions could not gain a minute of life. Here comes a huge wave, its white crest already begins to curl over its swelling bosom, with a crashing sound; now it gets steeper and steeper as it rolls onward, till now it rears up like a high green cliff, overshadowing a horrid abyss beneath. At the critical moment down goes the Scart, and when the danger has gone past, and the hurly burly subsided, up he springs again into day, unconcernedly discussing a nice fresh young cod, which he caught while taking refuge in the bosom of the Great Mother.*

Ah! and if we catch a Scart, is he capable of being discussed in his turn?—Of course.

Keep a sufficiently long time; skin off his jacket, and make him into soup,

* This "Plea for the Cormorant" reminds me of a reply made by a worthy old friend who, for a half century, has ruled the glens of Mull with his ramrod;—"*All* God's works are lovely; every beast and every bird is bonniest of its kind.—'Deed Sir! and the Hoodie Crow hersel is a pratty pratty beast, if it were na that she's just *ver-min*."

(it requires a couple of them to make it good;) and then I defy the Court of Common Council, or a jury of aldermen to detect the difference between it and the finest hare soup. A *Currie* does indifferently well; and the liver, which is of a large size, is as good as a Goose's. Having decided the gastronomic value of our friend, let us consider the ways and means of obtaining a few individuals to garnish our larder withal.

In winter, especially when stormy, we shall see them fishing at half tide, close along the rocks, and in the shallow sandy bays. They are wary, and diving they take care to get a good offing if they see the least danger; but it is nice practice to stalk one, running from one hiding-place to another while the bird is below water, till we succeed in attaining a rock that is within reach of him. As he emerges from the water, he turns about his head in search of anything suspicious, and carefully examines the shore before he will dive again, lest it conceals a lurking foe. But, in good weather, it is more amusing to follow our game upon its own element. We should approach the swimming bird to windward, for he prefers rising against the wind, and in calm weather, if well gorged with fish, he cannot rise without the help of the breeze under his wings. When he sees his retreat cut off in this direction, he swims about in evident perplexity, and often allows the boat to come within fatal distance.

Their quickness in knowing their enemies is very amusing; a heavy lumbering fishing-boat is allowed to pass close by, while the quiet insidious approach of the small gun-bearing skiff is suspected and fled from. At first they take short dives, but, if thoroughly alarmed, they begin racing, that is, diving and swimming determinedly away. It is then almost useless to attempt to overtake them.

When a bird sees it is no longer pursued, after rising to the surface, he flaps his wings, then expands them for a moment till he feels the breeze, and with laborious strokes rises off the water. These, as well as other sea birds, always try to cross the bows of a boat coming under sail, to get to windward; and generally escape by getting the weathergage, either by the boat being unable to get up to them, or at worst they can readily take flight up the wind as soon as they choose when the danger becomes pressing.

There are certain rocks very much frequented by the Cormorant, to rest upon and bask in the sun, often with wings spread, hanging out to dry. There they often sit motionless for hours, quite erect, looking exactly like rows of gigantic black bottles set out for a *soiree* of Fingalians, the gigantic heroes who built up the columns of Staffa for their banqueting-hall, where "the song and the *shell* went round." As the boat draws nearer, signs of uneasiness begin to appear, awakening yawns, stretching of wings, and waddlings to the overhanging edge of the rock; all the long necks are twisting about in active motion, as if the prudent creatures were trying thoroughly to *see their way clear* before taking a leap. *Crack!* goes a cartridge at sixty yards—whew!—down go the black gentry, tumbling and rolling head over

heels down the face of the rock, and disappear into the water. You think you have murdered the whole gang, but wait a second, and there they all come merrily bobbing up to the surface—a forest of black necks swimming away to windward. A few are within reach, and piff-paff, shoot 'em down is the word—no quarter given to them now.

Lastly we may visit one of the caves, as the swell of the Atlantic has sunk into a calm slumber, and will allow us to venture near them without danger to the boat. At the first alarm a string of birds pours forth almost right into our face; but still many remain, (especially if it is the breeding-time,) sitting on the high shelfs; even though we enter the cave, and repeatedly fire, creating a most dreadful din, and bringing down splinters of the rock from the lofty vaulted roof. If the young Scartlings are hatched, they keep up a perpetual clamour, very different from their taciturn parents; and the report of the gun frequently brings one toppling down over the edge of its coarse sea-tangle nest—a most ungainly-looking youngster. If we liked to wait here till evening, we might get almost any number of birds, as they will come flying home at sunset; for the Cormorant keeps early hours, and retires to rest with the sun; but we are contented with what we have done, and will now stay our hand from slaughter.

The Cormorant is very tenacious of life; when winged he seems to recover new life as soon as he strikes the water, and escapes by diving. When wounded they sometimes disappear in a mysterious manner; though there are plenty of quick eyes in the boat, and all around is smooth as a polished mirror, yet the wounded bird is not to be seen, and is believed by the boatmen to have gone down to the bottom, to remain there out of spite.

Some time ago I heard of a party of fishermen visiting a Scart's cave by night, and lighting a fire. The poor birds came fluttering down from their roosts, and were killed with sticks. However, in the midst of the confusion, smoke, darkness, flapping wings, and whirring of revolving *shillaleghs*, an unfortunate fellow was mistaken by a comrade for a gigantic *Phalacrocorax;* and the sharp crack of a broken skull was heard instead of the dull *thud* of smitten feathers, and the victim was taken home in the bottom of the boat as insensible as the bed of dead Cormorants on which he lay.*

The Cormorant generally flies low along the surface of the water, to and from its fishing-ground; though sometimes, when making a long passage, especially in windy weather, it soars up to a very great height. Occasionally, in a perfect calm, when the sea is as smooth as if solidified into crystal, a bird may be seen drying his wings without leaving the water; he sits erect in the sea, floating about with his wings spread in the air, presenting a curious appearance for half an hour on a stretch.

The Gaelic name, as I mentioned before, is Searble, pronounced *Scar-ruv.*

Iona.

* Were there coroner's inquests in these parts, the verdict would have been *served him right;* but the Highlander's cranium was not materially injured, though the shillalegh was considerably damaged by the collision.

THE RED-BACKED SHRIKE, OR BUTCHER-BIRD, (*LANIUS COLLURIO.*)

BY STEPHEN STONE, ESQ.

This species is rather plentiful in Oxon and Bucks; it seldom makes its appearance in these counties before the latter end of April, or the beginning of May, being amongst the latest of our summer birds of passage.

Although apparently of robust frame, it seems unable to bear the cold with the same degree of patience as the diminutive Chiff Chaff, and other species far more delicate-looking than itself; for in the unusually cold weather we had in June, 1852, I used to see it sitting shivering on the sheltered side of the hedge, and looking as comfortless, dejected, and woe-begone as our own fair sisters or cousins, "the maids of merry England," are wont to look, when through some blunder of papa's, or other inadvertence, they find themselves doomed to a month's sojourn at some "fashionable watering-place." "Furnished apartments with attendance" having been "secured" for them for that period, before the commencement, or, worse still, after the close of "the season."

In one of its habits, that of returning to a particular station, after capturing a passing insect, it closely resembles the Flycatcher.

I have known it take its stand for hours, near where a hay stack has been in the course of formation, for the purpose of pouncing upon the moths which generally abound amongst newly-made hay, and which it seemed to be fully aware would every now and then be dislodged by the men engaged in building the stack, and thus afford it unlimited exercise of its "catch-me-if-you-can" abilities, as well as an unlimited supply of food. These moths it generally caught on the wing, but should one chance to "come the artful dodge," and endeavour to baffle the intentions of its pursuer, by dropping amongst the herbage, it would be down upon it in a moment, and unless the poor insect had very artfully concealed itself, would be sure to drag it out; and fortunate indeed must that individual be, who by the above, or some other stratagem, succeeded in "saving its bacon."

I have often noticed this bird, when I have been out with the net beating for moths, sitting on a conspicuous branch, and intently watching my proceedings, when, should a moth escape my net, which not unfrequently happened, it would never fail immediately to give chase to it, and after capturing it, which it seldom failed to do, would return to the same, or a proximate branch, and again anxiously watch one's motions, in the hope no doubt of another miss on my part, which would be almost sure to be turned into "a decided hit" on its part.

I have frequently seen specimens of the Common Humble Bee transfixed upon thorns, evidently the work of these birds. In some instances I have met with them alive, in others dead; but in all apparently deserted, as though after capturing these insects, they had discovered they were useless to them as articles of food; or do they, as do our own venison-loving epicures, consider

their "game" improved by being "hung" till it has become "rather high?" or to speak plainly and intelligibly, till, venison-like, it has become as nearly as possible, an abominable mass of putrefaction. I feel disposed, however, to give them credit for a less perverted and better taste than this, and therefore would infer that it is far more likely that they content themselves with merely picking out the honey-bag, and the moist internal parts, rejecting the dry and husky exterior, and so leaving it to be bleached by the sun, and winds, and rains, in like manner as in days of yore, the bodies of great criminals were left suspended, as an "awful warning" to all misdoers.

I am aware that what I am about to relate will shed no lustre upon my character for humanity, but my excuse is, that I was at the time in want of specimens as a medium of exchange with an American gentleman, who was forming a collection of British Birds: this, I trust, will exculpate me from the charge of wanton cruelty, which otherwise might justly have been urged against me.

It was towards the end of May, when these birds usually pair, preparatory to the business of nidification, etc., I observed a pair, a newly-married couple seemingly, who had just decided on the place in which they should "pass the Honeymoon." A shot from the gun with which I was provided, made this young wife a widow. Apparently unconscious of what had befallen her, she removed but to a short distance along the same hedge, and in a few minutes after I had "bagged my game," and reloaded the gun, another "gallant" made his appearance, and whether he so well counterfeited the voice, mien, and manner of her "first love," as to make her, in the simplicity of her heart, really believe that it was he, I cannot say, but at any rate he was as graciously received as though he had been "the real Simon Pure." Our English law mercifully gives "the prisoner at the bar" the "benefit of any doubt" that may arise in his, or her case, we will therefore, if you please, be equally merciful, and give this "fair one" the "benefit of any doubt" there may be, as to whether she was really deceived in the above matter or not, for it would be a sad blot upon her character, if it should appear that she could knowingly "receive the addresses" of another, at the time that her late "lord" was lying dead but a few paces off; such conduct would be extremely shocking; surpassed 't is true by that of "The Lady Ann" in "Richard the Third;" this however is known to have been a mere invention of the poet, and not an historical fact. Whether Shakspere was induced to perpetrate this libel upon the "fair sex," merely for the purpose of heightening the effect of the piece, or whether he was prompted thereto, by the desire of giving vent to a little secret spite or malice, which from some cause or other he harboured against them, is a question upon which I shall not offer an opinion.

But to return from this digression. Another shot laid this second "Inamorato" prostrate; when a third appeared—he shared the same fate, and then a fourth. How far it might have been possible to have gone on with this

slaughter, I know not; to all appearance it might have been continued "ad infinitum;" but having now speeimens suffieient for my purpose, I felt no inclination to proceed with an experiment, cruel in itself, and useless as eruel.

From the above fact it would appear that the males of this speeies, on their migration to this country, are in the same forlorn eondition, at least "pro tempore" as the males of our own speeies, on their emigration to "our antipodes." In either ease, each female on her arrival is sought after with the utmost eagerness, and caught at with the utmost avidity, being considered —as indeed she ought in any case to be considered—if not "the noblest," at least the fairest "gift of God, etc."

Brighthampton, July 12*th.*, 1853.

NOTES ON THE DAYS WHEN THE SUMMER BIRDS WERE FIRST OBSERVED ABOUT BARNSLEY, WITH INCIDENTAL NOTICES OF OUR RARER BIRDS AND THEIR SYSTEMATIC EXTERMINATION.

BY MR. T. LISTER.

The present extract from my Note Book is restrieted to those days when a newly-arrived visitant or a rare bird was noticed. There will be by no means a full list of what with us are deemed the rarest, but only sueh as come within direct or ineidental observations, made more or less every day, throughout the first weeks of the present spring. The birds found in this locality will generally oeeur throughout the south-west part of Yorkshire, known geologieally as the "Yorkshire Coal Formation," extending in a series of well-wooded undulations, from the Magnesian Limestone range, at near three hundred feet elevation, to the great baek-bone range of Millstone Grit, at a height of from seventeen hundred to eighteen hundred feet above the level of the sea. Barnsley is near the centre, at a height of three hundred and ninety feet; while the heights immediately overlooking it are five hundred and fifty feet in elevation;—there being a regular increase of height in a western direetion.

In birds then it may be expeeted to typify the district, being equally removed from the level regions beyond the Limestone range, where birds of the marsh and sea mingle largely, and the sub-alpine regions, where the moorlands predominate. With great variety of situation, fruitful fields, valley streams, sedgy pools, patches of gorse and heath, fine parks and abounding woodlands, we have a good variety of birds; and should have many more and more thickly distributed, if half as mueh pains were taken in preserving, (after the manner of Waterton,) as in destroying rare birds. This question is worthy of being taken up by scientific men; since all true naturalists will admit that there is more satisfaction in studying living objects than dead representations;

and the chief of slaughterers, Macgillivray, confesses that all zoological collectors destroy ten times more specimens than they require.

Of the summer Warblers, to which these extracts are mainly confined, we have all the truly British species, except the Dartford Warbler and the Reed Warbler; the latter is stated by Neville Wood to occur in the adjoining county of Derby.

The times of their arrival in the district specified, as recorded in these notes, may be generally depended upon; except those kinds that are thinly distributed, as the Nightingale, of whose delightful melody the public are defrauded by the bird-catchers, (as bad in their way as the egg and skin collectors;) the Wheatear, the Stonechat, and the Lesser Whitethroat; the two latter species not having been observed this season.

As observers multiply, more correct results as to arrivals, departures, and relative numbers of species may be obtained. To assist some of the young naturalists rising around us, in overcoming difficulties which I have had to encounter alone, I have intermingled suggestions not always deemed needful to insert in books. My only aids were book-descriptions—an attentive ear, serving as guide to the eye in tracing the whereabouts of some uncommon bird—assisted, where practicable, with a small telescope—a more rational companion for a naturalist than the murderous gun; as with the former we can admire and spare for others to do so too, but with the latter we destroy the object of our present pleasure; and in the case of rare birds, we help to cut off the hope of future gratification.

April 4th., 1853.—This morning I walked with a young companion down Moltram Wood to the Dearne Valley—the route I usually take when in expectation of hearing the first notes of our spring visitants. We crossed the canal by the locks, and proceeded along its banks over the Aqueduct, which spans with its fine arches the winding Dearne. We followed the path where the canal sweeps in a graceful curve between the upper and lower Cliff Woods, where my friend returned, after listening patiently for a short time to catch a new note as distinguishable from the Tits, Jenny Wrens, and other resident birds—it is a proper winter study for the beginner to master these sounds ere the multiplicity of vernal notes, and the thickness of summer foliage come to confound his ideas of individuals in the general mass.

A few moments afterwards I was rewarded with the two slightly-varied notes of 'chil, chil,' which distinguishes at once the Chiff Chaff, not only from the two members of its family, (*Sylvia*,) from which it scarcely differs in external appearance, except in its shortness of wing, but makes it unmistakeably known from every other bird. Though scarcely to be dignified with the name of song, its two notes are gratifying at this early season as hopeful harbingers of the melody to come. I have not seen in any work an account of its call-note, but after long watching I have proved, what I had some time suspected, that it nearly resembles the pho-eet or tweet of the Willow Wren; a circumstance which increases the difficulty of distinguishing them where the

song—the readiest discriminating test of all three species—is not heard. The male, as I have proved in most species of this kind, has, in addition to its song, the same call-note as the female. Indeed I should have hesitated to pronounce the note aught else than that of the Willow Wren, had I not, while listening to a pair of Chiff Chaffs near to their nest, heard the 'chil chil' note repeatedly break, through a sort of chip chepping strain, into a plaining tweet, and the usual male note or song again resumed. The call-note, just described as resembling that of the Willow Wren, was uttered by the hen also: it will require long practise to distinguish them from each other, or from the kindred bird alluded to. It is difficult to represent sounds by written characters. It would be desirable for some phonographic principle to be applied in teaching the notes of birds to learners; there would not be such a confused mixture made of it. The word 'tweet,' for instance, is not improperly applied in describing the song of the Willow Wren, but it serves badly for that of the Wood Wren, as used by the great authorities, Yarrell and Macgillivray, and copied by others. The 'tzit, tzit' of Blyth duly modulated is much better.

April 16th.—This day is memorable for the first sight of those pleasing emblems of spring, the Swallows, which were seen skimming with graceful evolutions over the windings of the Dearne in Grange meadows, a locality where they are generally first observed in this part.

April 17th.—This morning I and the same friend took the omnibus and dropped down at Lund Wood, and traversed its vast undulating slopes, displaying in its interior depths many features of the advancing spring, not exhibited by its exterior aspect; where the fresh green birch distinctly standing out from the dark green mass of slowly-budding trees, presents the most striking character. Within the golden-brown flower is peeping out from its enveloping bud, and the *Stellaria holostea* has begun to mingle at intervals its white star-like petals with the deep azure of the Harebell. Many of the larger birds were observed, engaged in pairing and nesting avocations; amongst which were the graceful hovering Kestrel, the chattering Magpie, the cooing Wood Pigeon, the Carrion Crow, and "the beauteous Jay, with shrill wild scream."

The number of large birds observed this season about our ample-screening woods, is gratifying to contemplate. When we consider the many enemies which their striking peculiarities and marked colours, their money-value, and their obnoxiousness to popular and often unjust prejudice, have raised up against them—in the shape of wanton bird-nesters, remorseless keepers, and still more destructive skin-collectors; more fatal, because aiming at the rarest birds, and confessedly more greedy than the ends of science require; as there are now museums amply sufficient for accurate description or classification. Our noblest birds of the Falcon family, as Waterton emphatically remarked to me, are gone, and the rest, with the exception of the Kestrel, are fast following the fate of the Bustard and Bittern; the former a bird of the past, the latter

nearly extinct. In this part the harmless mouse-eating Kestrel is the most numerous of the tribe, but greatly thinned; the Sparrow Hawk is next to it in numbers; after that, at long intervals, the Merlin and Hobby may be perceived, once or twice in a season, with close observation.

Former notes have recorded my observation of the Merlin taking its prey on the wing during the winter. The White and Brown Owls I have seen once or twice; and the Long and Short-eared Owls have been procured in this neighbourhood.* A fine Osprey, well preserved by the veteran Reid, of Doncaster, now in the possession of a neighbouring gentleman, was shot on the moors westward of us, towards Saddleworth. This same observant neighbour, in discussing the difficulty in the way of preserving the doomed race of Hawks from extinction, observed that he could not prevent his keepers from destroying even Jays and Magpies; that their skins too had their price, and thus the mark of destruction was set on their heads.

(*To be continued.*)

LOCAL JOTTINGS.—No. 10.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

The Rat, (Mus decumanus.)—Most of your readers will doubtless remember the story of the boy at Dr. Burney's school, who saved himself from a flogging for laughing, during prayers, at seeing a Rat slide down the rope of the school-bell, by, on the instant, composing these lines—

> "There was a Rat, for want of stairs,
> Came down a rope, to say his pray'rs."

Mr. Waterton has given some notes, whimsical and otherwise, of these "plagues of life." I have just heard of something like a similar instance of sagacity (I mean on the part of the Rat,) as the above, and I think it worth jotting:—

Mr. Scott, of Martinstown, a year or so since, had a rick of wheat infested with Rats, to which he could not understand their mode of approach. He however got his men one day to put a Ferret in the rick, and stood watching. There was an apple-tree adjoining, the upper boughs of which were at least three feet from the top of the rick. Whilst standing quietly looking on, he observed a very large Rat peep out of the rick nearly at the top, and thinking the coast clear, gave a spring to the bough of the apple-tree, ran down the trunk of the tree, and escaped through a hedge near. On examination he found that this was evidently the mode of ingress and egress to and from the rick, discovered by these sagacious and destructive animals.

* The Kite, the Common and Rough-legged Buzzard, in solitary instances, have been shot in the neighbouring domains of Cannon Hall Park.

The Trout, (Salmo fario.)—The Trout, as I have before stated in my Notes, does not often attain any very large size in the River Froome; and I therefore mention that one was taken with an artificial fly this week by Mr. Frederick Fort, Auctioneer, weighing two pounds, three-quarters, and two and a half ounces. This is very large for this river; it was caught at Grey's Bridge, near the town.

Coldness of the Weather.—Up to this time, for a very long period, the coldness of the weather in this neighbourhood has been very unfavourable to entomologists, and has been particularly observable. I myself, although much engaged in business, confess to occasionally "stealing a day" for rambling in the fields and woods "entomologizing;" but this year I have been sadly disappointed on account of the weather. In one whole day I only took specimens of the Small Skipper, (*Pamphila Linea,*) Silver-washed Fritillary, (*Argynnis Paphia,*) Large Meadow Brown, (*Hipparchia Janira,*) and Wood Ringlet, (*Hipparchia Hyperanthus,*) in a field near a wood; and with great difficulty procured from the ferns, broom, etc., in the wood; one or two specimens only of *Coccinellidæ;* and several of the order *Hymenoptera;* whereas in other years I have at the same season discovered at least three or four times the number.

Dorchester, July 30th., 1853.

BRITISH EVERGREENS.—No. 3.

BY J. MC' INTOSH, ESQ.

(*Continued from page* 226.)

Ilex dipyrena.—The Two-seeded-berried Holly, a very interesting and picturesque shrub, a native of Nepal and Chinese Tartary, about twelve feet high. It bears a close resemblance to the Common Holly of England, especially when covered with its clusters of red berries; it was long considered as only a variety of the Common; it is, however, quite distinct. It is also known under the name of *I. Cunninghamii,* in some nurseries.

" excelsa.—A lofty Nepal species, quite hardy; this is the *spinosa* of some authors.

" elliptica.—This fine species is a native of Peru.

" latifolia.—The Broad-leaved Holly. This fine species is a native of Japan; leaves dark green, from six to eight inches long, and three to four inches broad, very stiff, smooth, and shining, with serrated edges, quite hardy, and grows to the height of twenty feet. This very desirable species should be in every collection of Trees and Shrubs.

" laxiflora.—The Loose-flowered Holly, a native of Carolina, introduced in 1811; flowers in May.

" macrophylla.—This species is a native of Japan.

" microcorpa.—This is another of Mr. Fortune's introductions from the North

of China. It is very unlike any other known Holly; the leaves are fleshy, quite smooth on both sides, about two inches and a half long, and of an ovate form; when young they have a purplish tinge. The berries are small, and are borne in large axillary clusters.

Ilex myricoides.—This species is a native of the mountains of New Granada.

" magellanica.—Magellian Holly. This species was introduced in 1838—a handsome species.

" myrtifolia.—The Myrtle-leaved Holly flowers in July and August; native of the West Indies, introduced about 1806; forms a dense bush of an upright growth.

" Nepalensis.—(The *I. elliptica* of some,) is a Nepal shrub, growing to the height of eight feet.

" opaca.—The Opaque-leaved, or American Holly, a beautiful evergreen, native of North America, according to Prush growing to the height of eighty feet; introduced in 1744, flowers in May; leaves ovate, flat, toothed in a scalloped manner, spiny, but not glossy. This is the Common Holly of America, being used in that country for the various purposes to which our native Holly is applied.

" odorata.—Described in Dons. Prod: Fl. Nep: at page 189; said to have sweet-scented flowers, a native of Nepal, not yet, that we are aware of, introduced into this country.

" Paltoria.—An evergreen shrub, found on the highest mountains in Peru.

" Paraguariensis.—Paraguay Tea Holly; native of Paraguay, introduced in 1823. "The Tea Tree of Paraquay is one of the most useful trees in that country. It is found growing spontaneously intermingled with other trees in the forests, which covers the banks of the rivers which flow into the Parana and Uruguay. In size it equals the common Orange Tree, but in those places where the leaves are gathered, it naturally becomes stunted from the mutilations it receives every two or three years, owing to an opinion that this time is required or requisite to season the leaves, which do not fall off in winter. The leaf is elliptical cuneiform, from four to five inches long, thick, glossy, of a dark green above, and pale below. The method of preparing the leaves is as follows:—A hurdle of long poles is constructed, in the form of cylindrical vaults, which they call barbaqua, under this a large fire is made, and the branches being placed upon the hurdle, remain there till they are sufficiently dry; after this they remove the fire, and on the hard and hot platform, after being swept clean, they throw the branches, which they beat to separate the leaves. This being accomplished, the leaves are put into large bags made of hides, which have the four upper corners fixed to four large stakes placed in the ground, sufficient to support a considerable weight; into this they put the leaves, and beat them down with a pole. When the bag is filled and packed hard, the mouth is sewed up, and without any further preparation the

leaves are fit for use; but not considered properly seasoned till they are some months old. The leaves are used in Paraguay, La Plata, Peru, and Quito at all hours of the day, by putting a handful into a kind of tea-cup called mate, (which has given its name to the herb,) and from the spout of this pot the liquid is imbibed. Some mix sugar with it, and others add a few drops of lemon juice; and by pouring fresh boiling water the infusion may be renewed. Two hundred thousand arrobas, equal to five millions of pounds, are annually obtained from Paraguay; one hundred and ten arrobas of which go to Chili, whence Lima and Quito are supplied: the rest is expended in the viceroyalty of Buenos Ayres."—Abridged from "Seminario de Buenos Ayres," page 401, vol. iv. Wilcoks, in his "History of Buenos Ayres," page 494, says, "That there are three kinds of it in its prepared state, though produced from one plant. It is aperient and diuretic. Like opium it produces some singular and contrary effects,—it gives sleep to the restless, and spirit to the torpid. Those who have once contracted the habit of taking it, do not find it an easy matter to leave it off, or even to use it in moderation, though, when taken to excess, it brings on similar disorders to those which are produced by the immoderate use of strong liquors."

Ilex Perado.—The Perado Holly. This is the *Ilex maderensis* of Lam. It is a low tree, native of Madeira, and was at one time cultivated in the greenhouse; it is however quite hardy. There is a plant of this species in the nurseries under the name of *I. Maderensis atrovirens*.

" rupicola.—This species is a native of Peru.

" salicifolia.—Willow-leaved Holly; native of Mauritius, and introduced about 1818.

" serrata.—Native of Nepal; quite hardy in the south of England.

" vomitoria.—(This is the *I. religiosa*, Bart. Fl. Virg.; the *I. floridana*, Lam; the *I. ligustrina*, Jacq.; the *I. Cassine vera*, Walt.) The emetic Holly, or South Sea Tea, native of Florida, Carolina, and Virginia, moist shady places, introduced in 1700; leaves, oblong elliptic, obtuse at both ends crenately sawed. Rafinesque says that this plant is considered a holy plant by many of the southern tribes of American Indians, being used during their religious rites and solemn councils, to clear the stomach and the head. Women are forbidden the use of it. For these purposes the leaves and young shoots are collected with care, and, when dried, form an article of trade among the tribes: they often slightly scorch the leaves before using them. They are inodorous, the taste is sub-aromatic and fervid; they are considered useful in stomach fevers, etc., as a mild emetic, but the Indians' *black drink* is a strong decoction of them, and a violent, though harmless vomitive: it is used warm as the Chinese do their daily tea. The Indians, we are told, consider this tree as a panacea; at certain times

of the year they hasten in droves to the coast, they make a fire upon the ground, and putting a kettle of water on it, they throw in a large quantity of these leaves, and, sitting round the fire, they drink large draughts from a bowl—they repeat this for two or three days. By this time they consider themselves sufficiently purified, and taking a bundle of the leaves, they arise, and return each to his habitation.

"Hurrah for the Holly! the green and gay,
When the buds of summer are past away,
With dark, bright leaves, and berries red,
To crown King Winter's hoary head.

Hurrah for the Holly! amid the snow
He joyously peeps with a red, warm glow;
Though the frost may come, with his with'ring frown,
He never can keep the Holly down.

Hurrah for the Holly! that still smiles on,
When summer and sunshine are past and gone,
Like the friend who, whatever cloud may lour,
Is friendly still in our darkest hour."

Wordsworth also praises the brave old Holly in the following lines, with which we must conclude:—

"When leafless Oaks towered high above,
I sate within an under-grove
Of tallest Hollies, tall and green—
A fairer bower was never seen.
From year to year the spacious floor
With withered leaves is covered o'er.
You could not lay a hair between,
And all the year the bower is green."

5, *Middle-Street, Taunton, Somerset, July,* 1853.

(To be continued.)

A BOTANICAL RAMBLE ALONG THE BEACH FROM BRIGHTON TOWARDS SHOREHAM.

BY J. E. SMITH, ESQ.

It is the first of June when nature, having passed the period of her childhood, and not yet donned the sober dress of summer, blooms with all the full developed graces of a youthful bride; and although Brighton may not be the place to see her in her loveliest form, yet to the mind that can appreciate the beauty and perfection of her works, there are few strolls more pleasing than the one that we shall take to day.

Leaving the high road, and wandering on the wide beach, overgrown with plants of various kinds, the eye is attracted by the large masses of colour in which the flowers are arranged, either upon a soft ground of verdant turf, or upon a grey one of mottled pebbles, with a beauty of effect that must excite the admiration of the artist, or drive him to despair at the hopelessness

of ever imitating such a delicate blending of tint with his artificial pigments.

Yonder mass of quivering white and pink, and those handsomely-carved glaucous leaves stretching over the barren shingle, soon to be adorned with large yellow flowers of delicate texture, and long horn-like pods, are the one, *Silene maritima,* (Sea Campion;) the other, *Glaucium luteum,* (Yellow Horn-poppy,) which together with this elegant little straggling tare, *Vicia* (*Ervum*) *hirsutum,* form the commencement of vegetation, and bind the pebbles with their entangling roots.

But here is a grassy plain thickly sprinkled with Daisies, (*Bellis perennis,*) all turning to the sun their golden eyes and radiant crowns of white; beyond is a gentle undulation clothed with a mass of delicate pink, that seems rather to hang in the air than to rest on earth, and of such gossamer texture that you tremble lest the rising breeze disperse it like a mist;—it is the Thrift or Sea Pink, (*Armeria maritima,*) growing in the most luxuriant profusion; we might take away a cart-load without its being missed. It makes a pretty edging to a flower border.

The grass we walk upon is quickly interspersed with the slender cream-coloured flowers of the Subterranean Trefoil, (*Trifolium subterraneum,*) which has a most curious habit of burying its fruit; for as the legume approaches maturity, it becomes deflexed, and the peduncles lengthen; from the top of these arise many thick fibres, with five palmated teeth at their extremity, that soon curve themselves over the fruit, and serve to bury it in the soil. A little later in the season we should see the Hare's-foot Trefoil, (*Trifolium arvense,*) with its head of flowers clothed with soft hairs, not unlike the foot of the animal from which it takes its name; about the same time another curious Trefoil will be in flower—*Trifolium fragiferum,* whose heads of fruit resemble pale strawberries, or the whilk's spawn, so often seen blown about on the sea-coast, like hardened balls of froth, called soap balls, or wash balls by the sailors. Here also is *Trigonella ornithopodioides,* (Bird's-foot Fenugreek,) a rare plant, with bunches of pods like birds' feet, and on the bank are *Trifolium minus,* or *filiforme,* that diminutive Yellow Clover, so common by the roadside, and *Trifolium repens,* (White or Dutch Clover,) the Shamrock of the Irish; though the original Shamrock, or Seamrog, according to Hooker, was the Wood Sorrel, (*Oxalis acetosella.*)

The other plants to be found here of the same natural order *Leguminosæ,* are *Anthyllis vulneraria, Ononis arvensis, Medicago sativa, Vicia sativa, Trifolium pratense,* (Purple Clover,) *Vicia sepium, Vicia Bithynica,* a rare plant, with only one purple and white flower on a peduncle, blooming in July, and two pairs of lanceolate leaflets, *Medicago maculata,* resembling a Clover with a head of a few small yellow flowers, and a trefoil leaf, having a black spot on each lobe; and glorious masses of the bright golden Bird's-foot Trefoil, or Old Man's shoes and stockings, (*Lotus corniculatus,*) luxuriating everywhere among the barren pebbles, where you would think there was neither earth nor moisture; embellishing the meagre turf on which we tread, and hanging

out its yellow flag triumphantly upon the green slopes, beautifully contrasted with those delicate wavy tints of light blue Flax, (*Linum angustifolium*,) with which the banks are occasionally dashed, as though the sky had here impressed upon the earth a gentle reflex of its own celestial colour; or the breath of some passing fairy, fresh from its harebell home, had left, upon these grassy cliffs, the hue of its favourite flower: but to return to the order *Leguminosæ*, plants which bear legumes or pods.

"It is not only among the most extensive that are known, but one of the most important to man for ornament, utility, and nutriment. When we reflect that the *Cercis*, which renders the gardens of Turkey resplendent with its myriads of purple flowers; the *Acacia* not less valued for its airy foliage and elegant blossoms than for its hard and durable wood, the logwoods and rose-woods of commerce, the *Laburnum*, the classical *Cytisus*, *Florentem cytisum*. The Furze and the Broom, the pride of the otherwise dreary heaths of Europe, (the former the peculiar and appropriate ornament of the South Downs, the latter more partial to the sandy soil of the Weald;) the bean, the pea, the vetch, the clover, etc., objects of the farmer's care, are so many species of *Leguminosæ*, and that gum-arabic, indigo, and other precious drugs—*senna*, liquorice, and manna are products of this family, it will be seen that few orders can have greater claims upon the attention."

(*To be continued.*)

SOME ACCOUNT OF THE LEPIDOPTERA ROUND EXETER.

BY MR. EDWARD PARFITT.

(*Continued from page* 155.)

Family Hesperidæ.

Of this interesting and curious family we possess most of the species indigenous to Britain; they being, as it were, the stepping-stone or the link in the chain connecting the two great families together—the Diurnal and Nocturnal Lepidoptera, or the Butterflies and Moths, proper. The first, and indeed a rather common insect with us, is the Grizzled Skipper, (*Thymele Alveolus*.) This insect is plentiful with us most years in Stoke Wood, in the Furze-brake, and on Haldon also. *Thymele Tages*, (Dingy Skipper,) is by no means common; now and then one is to be taken in Stoke Wood, and I am not aware of its being found anywhere else about here. *Pamphila Sylvanus:* this is a very common insect on most of the heath lands in this neighbourhood, such as Stoke Wood and Exwick, and on Haldon plentiful. One more only remains to be mentioned, and that is the Pearl Skipper, (*Pamphila Comma*.) This is a rare insect; I have only taken one pair, and those were taken at Exmouth three years ago: it is a distinct and very beautiful insect. I think it very probable that the others belonging to this family might be found round the neighbourhood of Torquay, or on Dartmoor, in the Limestone or Granite district.

Ino Statices, (Green Forester Moth,) has been taken some years ago near Newton: I have not heard of its being seen since. *Anthrocera Filipendulæ*, (Six-spotted Burnet Moth.)—This insect is common round Torquay. The Five-spotted Burnet Moth, (*Anthrocera Loti*,) is a rare insect; it appears to be confined to the Limestone district of Torquay. *Smerinthus ocellatus*, (Eyed Hawk Moth.)—I have not heard of this fine insect being taken here, but *S. Populi* is rather common. *S. Tiliæ*, (Lime Hawk Moth,) is not at all common—I have only seen two or three specimens.

Sphinx Ligustri is sometimes taken here, but it is by no means a common insect, as I have only seen but five or six specimens since my residence here. One of the most beautiful of our native insects is the Elephant Hawk Moth, (*Metopsilus Elpenor*.) About five years ago several caterpillars of this fine insect were taken in the Cemetery, in Exeter, and each of them in due course produced a fine specimen; another I took myself near the River Exe feeding on the White Lady's Bed-straw, (*Galium uliginosum*,) which I reared, and it is now in my cabinet. The Death's Head Moth, (*Acherontia Atropos*.)—Several fine specimens of this beautiful insect have been taken here; also two or three of that gorgeous insect, the Convolvulus Hawk Moth, (*Sphinx Convolvuli*,) I have seen in the possession of — Ross, Esq., of Topsham, in whose museum the specimens are placed. These, I was told, were caught at Topsham, a village four miles from Exeter, situated at the estuary of the Exe. *Macroglossa Stellatarum*, (Humming-bird Moth,) is tolerably plentiful, but by no means a really common insect, though you may take several in a season; they appear particularly fond of *Verbenas*, or rather the nectar contained in the flowers. I do not know if any of the readers of "The Naturalist" ever saw one of these insects at rest, I can only say that I never did, though I have watched several at different times. *Trochilium Tipuliforme*, (Currant Hawk Moth,) is a common insect, or at least you may rear almost as many as you like, as the caterpillars, or rather grubs, are much too common, for limb after limb of our currant bushes keep dying off, without any apparent cause, till it is found that the larvæ of this Moth are the cause of the mischief.

It now remains for me to enumerate, as far as my knowledge of the subject goes, the Nocturnal species, beginning with the Ghost Moths:—*Hepialus lupulinus*, (Small Swift Moth;) *B. M. C.* means the British Museum Catalogue, from which most of the names are taken. This Moth is found in tolerable plenty round Exeter; *Hepialus Humuli*, (Ghost Moth,) is also common in the quiet shady corners of lanes, swinging to and fro, as it were, sometimes showing one side of its wings, and then the other, so at every alternate swing you lose sight of it entirely from the under side being brown, and the upper satin white—this only applies to the male insect, the female being quite a different colour. The Goat Moth, (*Cossus Ligniperda*.)—This beautiful Moth is by no means common; I have only seen two or three specimens since my residence here. One I found on the road had been crushed by some person's foot, near Dunsford; and two caterpillars I have had brought to me,

which were found walking along the road near Exeter. *Pygœra Bucephala*, (Buff-tipped Moth.)—This very beautiful and distinct species is rather common in the caterpillar state, feeding on the leaves of elms; the perfect insect is rarely to be taken on the wing, consequently the best way to have good specimens, is to rear them.

Cerura vinula, (Puss Moth,) is by no means common; I think it may be on account of the district being rather bare of willows—its favourite food, that is in the caterpillar state. The Figure of Eight Moth, (*Diloba cœruleocephala.*)—This is not a common Moth, and a very good thing too for our gardens, as the caterpillars are very destructive to our apple-trees, etc. *Clesiocampa castrensis*, (Ground Lackey.)—I have only taken one specimen here. *Clisiocampa neustria*, (Lackey Moth,) is much too plentiful; I have now two broods in my garden, one on a laurel-tree, the other on a scarlet-thorn. *Saturnia Pavonia minor*, (Emperor Moth.)—This is a rare insect about here; I have seen but one specimen, and that was bred from a chrysalis found at Exmouth two years ago. *Lassiocampa Quercus*, (Oak Egger Moth,) is by no means common. *Lassiocampa Trifoli*, (Grass Egger Moth,) is very rare; I have only seen two specimens, which are in my cabinet. *Odonestis potatoria*, (Drinker Moth,) is an abundant species, particularly the males—you may take ten males to one female I believe; generally speaking, I think the males of this species vary more in their colouring than any other insect which I am acquainted with; for should you take ten males you will scarcely find two alike. The Light Tussock Moth, (*Dasychira pudibunda*,) is frequently to be met with. The beautiful White Satin Moth is very rare; I have only seen one specimen, and that was taken in Matford lane, July, 1850: it is now in my cabinet.

The very beautiful and rare Moth, the Clouded Buff, (*Diacrisia Russula;*) I have only seen one specimen, which I took on Haldon in 1851. I brushed it out of the furze bushes on the heath. The Garden Tiger Moth is tolerably plentiful, as is also the Cream-spotted Tiger Moth, (*Arctia villica*,) which has been very common this spring about Exeter. The Large Ermine Moth, (*Spilosoma Menthastri*,) is an abundant species; also the Spotted Buff Moth, (*Spilosoma lubricipeda.*) The beautiful Spotted Muslin Moth, (*Cycnia mendica*,) is not common, though I have seen several specimens taken here. *Callimorpha Jacobææ*, (Cinnabar,) is very abundant; it has been particularly so this spring. A most beautiful variety I found this morning on the Topsham road; it is larger than the generality of specimens, but unfortunately the two anterior wings have got the posterior part of them torn away, I suppose from a horse or some one having trod on it. The antennæ are much shorter—about half the usual length, and the same size throughout. The anterior wings are about the same colour as *C. Jacobææ*, but the red stripe which runs along the anterior margin is part of it buff in my variety, (or species;) the two spots on the outer edge are shaded with buff. The posterior wings are beautifully marked, and quite perfect; the ground colour is about the same

as *C. Jacobææ*, but each wing has got a large patch of buff colour covering nearly half the wing, with the nerves retaining the red colour of the species, so as to give the wings a streaky appearance with red and buff. Had the fly been perfect, it must have been very beautiful; but as it is, with its ragged wings, I prize it much: is it a species, or what is it? *Lithosia luridiola*,* (Common Footman,) is not a very abundant Moth, though several are to be taken in a season. *Triphæna orbona* is a very common Moth; also *T. pronuba* is equally as numerous, darting out of the grass as you walk along. *T. fimbria* is by no means common, in fact it is a rare insect, as I have seen but two specimens since my residence here. The one which I possess, taken in this neighbourhood, an acquaintance of mine, who collects Moths merely for their beauty, gave me the choice of picking out from some duplicates of his, but as his eyes are not so keen in the discriminating of species as my own, he had to be the loser of his Broad-bordered Yellow Underwing.

Agrotis exclamationis, (Heart and Dart,) is rather a scarce insect; *Agrotis Tritici* is also a rare species: I have only taken two specimens. *Graphiphora plecta*, (Flame Shoulder,) is a common insect. The True-Lovers' Knot, (*Lycophotia porphyrea*,) is exceedingly rare; I took or rather found one specimen on Haldon in 1850, sitting on a thorn stump in the hedge just at the back of Haldon House; it is the only one that I can learn has been taken in this neighbourhood. *Semiophora gothica*, (Hebrew Character,) is rather a common insect. *Orthosia cruda* is a common Moth with us. *O.*† *spadicea* is not very often to be met with. The beautiful Copper Underwing is a very rare insect indeed; I have only heard of or seen but one specimen; it was taken in the butler's pantry at J. Milford's, Esq., Coaver House; it is now in my cabinet.

(To be continued.)

Miscellaneous Notices.

Occurrence of the Osprey, (Pandion haliaëtos.)—A fine specimen of the Osprey was shot on September 11th., at Weybridge, by a gentleman, who resides in Chancery Lane, who was out on a fishing excursion. I believe Mr. Yarrell saw the bird on the 12th. or the 13th. I have two specimens of the Little Stint killed last Tuesday on the Black Shelf, near Gray, on the River Thames.—JAMES GARDNER, 29, Great Marlborough Street, September 19th., 1853.

Anecdote of a Chaffinch, (Fringilla cœlebs.)—I once observed a species of instinct in this little bird, which, as I do not remember meeting with any similar instance in other birds, and have not met with any one who has, I consider worthy of notice. Chaffinches are suspicious birds, and very clamorous if you approach the nest, even whilst it is building, much more when there are eggs or young; and as they are very neat and cunning architects, and particularly clever in concealing their place of nidification, they thus often neutralize all their care, and by their cries attract the attention to, and thereby discover what they have taken so much pains to conceal; and if the nest, in course of building, should be too curiously looked at, or visited

* Quere, Complana, Ed.

† Glæa, Ed.

too often, they will usually forsake it. I discovered a nest of these birds some years since, by seeing the pair constantly engaged in gathering materials, and always taking flight in one direction. It was close to a walk which was constantly used, and hence in passing it was natural to have a look at it; this speedily caused them to desert it, but it was too much to repeat all their labours in collecting materials, so the old nest was, bit by bit, torn to pieces, and taken to construct a new habitation, which was more quickly built than the first; and I then called to mind another instance of the same kind, which had puzzled me at the time, but was now explained. I will pledge myself as to the truth of the above fact, having watched the operation with considerable interest, although I did not discover the new nest until the young were fledged. The time which was occupied in forming the second nest, from the materials of the first, clearly appeared by the age of the young when I discovered them, and the identity of the materials from the somewhat singular circumstance, in this instance, although the general fact is by no means uncommon, of some pieces of muslin and carpet sweepings of a peculiar pattern, being in both.—O. S. Round, London, February 3rd., 1853.

Note on the Nest and Eggs of the Wood Sandpiper, (Totanus glareola.)—I obtained a nest, containing four eggs, of the Wood Sandpiper on the 23rd. of May, 1853, from a birch plantation, situated some distance from a small loch in the county of Elgin, N. B. I saw the bird fly off the nest, and I remarked to my companions that it was a Wood Sandpiper, and when I saw the eggs I was perfectly satisfied that I was correct. I have shown them to Mr. Yarrell, who says they are extremely like that bird's eggs; and Mr. Boud has also seen them, and has no hesitation in pronouncing them as such.—C. Thurnall, Whittlesford, Cambridge, September 5th., 1853.

Note on the Nest and Eggs of the Dotterel, (Charadrius Morinellus.)—I likewise had the good fortune to take in the same neighbourhood two nests, containing three eggs each of this bird, and another nest, containing three eggs, has been taken since I left.—Idem.

Note on the Grasshopper Warbler's Nest, (Salicaria locustella.)—On the 5th. of June, 1853, I had a nest of the Grasshopper Warbler, containing six eggs, brought me from Duxford, near Cambridge. I have some of these eggs, and also many other species collected in this neighbourhood, in duplicate, which I should be happy to exchange with any of your readers.—Idem.

Night Heron, (Nycticorax Gardenii,) *at Blackpool.*—A rare bird was shot near Blackpool by Mr. Daniel Lare, of Normoss, on the 14th. instant, namely, the *Nycticorax Gardenii*, (Night Heron.) It is as beautiful a specimen as could be wished for. The following are the measurements taken before I skinned it:—Full length, from tip of bill to longest tail feather, twenty-two inches and a quarter; extent of wings, thirty-nine inches and a half; wing from flexure, eleven inches and a quarter; length of bill along the gape line, three inches and a quarter; tarsus, two inches and seven-eighths; middle toe, two inches and five-eighths; claw, half an inch; the three white occipital feathers are without the black tip; the crown and nape, with the fore part of the back and the scapulars, greenish black; wings and tail, bluish grey; lower parts, very light cream. It may be seen at my shop at Blackpool.—James Bost, Blackpool, June 18th., 1853.

Egg of the Tree Sparrow, (Passer montanus.)—In my notes on the Tree Sparrow I stated my intention of endeavouring to ascertain whether the light-coloured egg I have invariably found in each nest of this species, which I have had an opportunity of examining, was "the last laid, or the first, etc."—I have now ascertained that it is the last. This fact would seem to strengthen the opinion of Mr. Yarrell, quoted by the Rev. F. O. Morris, in the article on the Kestrel, in his "History of British Birds," that the want of colouring matter on the shell of the egg is "occasioned by the temporary constitutional exhaustion the bird has sustained." Having had occasion to mention the work on British Birds by the Rev. F. O. Morris, now in course of publication, I cannot avoid expressing my opinion that it is a work which every lover of nature, every one who wishes to become "intimately acquainted" with the feathered tribes of our land—and I know not what more desirable, or at any rate what less objectionable "acquaintances" he can form—ought by all means to possess himself of. The peculiarly pleasing and happy manner in which each bird is introduced, its history given, its habits and peculiarities described, and the numerous anecdotes, contained in such history, related, impart a charm of no ordinary kind to this work;

a charm only equalled by that which pervades the "History of British Butterflies," by the same author; and I must here express my earnest hopo that the Rev. gentleman may be induced to extend his labours to the illustration of the next family, the British Sphinxes. From his masterly hand a splendid volume upon this family would proceed, which could not fail of being hailed as a most desirable accompaniment to his "British Butterflies:" not only are the perfect insects of this family surpassingly beautiful, but the caterpillars also of most of them possess great beauty. A coloured engraving of the perfect insect, with the caterpillar on the plant, or a portion of the plant upon which it usually feeds, also coloured, would form a very pleasing picture; while the addition of the chrysalis, although it might not add to the beauty of the picture, would at least add to its usefulness, and would therefore be a valuable addition. I trust many will unite in entreating the Rev. gentleman to take this suggestion into consideration. —Stephen Stone, Brighthampton, July 26th., 1853.

Note on a Wild Bee, (Bombus terrestris?)—In the early part of January, 1853, when visiting an old friend of mine, upwards of eighty years old, and even now as careful an observer of nature in his own limited grounds and sphere as he ever was, I received from him the particulars I am now about to relate:—At the bottom of his garden was a weather-board fence or paling, thickly overgrown with the common broad-leaved Ivy. Under the shelter of this green screen a pair of Robins formed an early nest in the spring of 1852. They were carefully protected from the house-cat, which in fact was rather friendly than not to the parent birds; for though she watched them long and often, she never made an effort to molest them. In time the brood was off, and every object of tho Redbreasts was attained. The nest remained, and was unnoticed by the old gentleman for many weeks, until one day, in walking round his garden, musing, his thoughts reverted to the Robin's nest, and he looked at the deserted home, but indeed it was not deserted, but inhabited and carefully roofed over, for he saw a Bee of a wild species emerge from a small aperture near the top, and another, and another Bee. They returned and seemed busy in gathering sweets, and storing them safely away. They revelled on the balsams, and amused the old gentleman much; daily he gave them a look, and they continued their labours. He did not think this colony of Wild Bees exceeded a dozen; for his garden being a small confined space, he watched and counted them daily, and they never passed that number. They appeared to have taken straws, or the bark of the bean-stalk, when nearing perfection; it might have been the cortex of some other tree or plant, or some entirely different material; but whatsoever the matter employed, it was used carefully, and made a strong roof, cemented over with some ceracious matter, not supposed to be pure wax. The little workers were observed till even the middle of November at work, and seeking their home; but the wet of the heavy and continued rains at that time would have injured them, for the Ivy did not offer a waterproof protection; so the old gentleman placed a tin awning over them, and this was quite successful. He was anxiously awaiting spring when he gave me this information, that he might once more observe the further operations of this colony of Wild Bees. When I hear, I will record all further remarks on them. It is no unusual matter to discover the nests of Wild Bees in trees and banks; and White relates that near Lewes they formed nests in the summit of a chalky promontory. But with those I have described, the curiosity is, the discarded nest being selected, and the mechanical skill exhibited in a roof being added. This is a very powerful argument to uphold the assertion that a something more than instinct, close bordering on wisdom, characterizes the works of many of the lower orders of life, and leaves man in admiration at their possession of such talents inherently, which to him are not natural, but only acquired, and that often by great patience and industry.—G. R. Twinn, Bawburgh Hill, near Norwich, May 9th., 1853.

White Variety of Lamium amplexicaule.—During our rambles in the neighbourhood of Aberystwith in search of rare flowers for our Herbal, we one day found a specimen of *Lamium amplexicaule*, (Henbit Nettle,) perfectly white. You are aware that the usual colour of this flower is "crimson," but on this there were no spots or trace of red. The plant agreed in every particular with the description given by Withering of *L. amplexicaule*, and grew in the same manner as the red, of which there are many roots here. Its situation was on a broken hill amongst furze. There was another flower in bud, which looked equally white. Can any of your readers inform us if it is often found in this variety, or if it is another species?—C. and J. D'Arcy, 51, Terrace, Aberystwith, August 13th., 1853.

I have in my possession two fish-hooks taken from the stomach of a large Cod, *(Morrhua vulgaris,)* caught in the Frith of Forth the other day. Attached to each hook is a piece of cat-gut fishing-line. One would have been apt to imagine that the sharp-pointed barbs of the hooks would have prevented their being swallowed.—JOHN DOIG, Surgeon, Torryburn, Fifeshire, July 8th., 1853.

Colias hyale *in Sussex.*—Having seen several notices of the capture of rare insects in your pages, I beg to inform you that Mr. F. M. Alexander, of this town, caught a beautiful female specimen of the Pale Clouded Yellow near Brighton, on the 24th. of June last. This insect, together with *Colias edusa*, is frequently met with here. This gentleman was also lucky enough last year to procure the *Metopsilus Nerii*, mentioned at page 230 of your second volume.—J. CAVAFY, Brighton, August 6th., 1853.

TO THE EDITOR OF THE NATURALIST.

Sir,

I think the request contained in the following letter cannot be better complied with than by forwarding it to you for consideration, and if approved of, for insertion in "The Naturalist." I fully concur in the opinions expressed by Mr. Long, and when to the causes mentioned by him as tending to diminish the number of our native birds, and also those which periodically visit us, are added, the inclosure and clearing of tracts of land, the draining of fens and marshes, and the unwearied exertions of professed bird-catchers, it is not possible to contemplate without regret how many birds, once familiar, are yearly becoming more rare.

I remain, Sir, yours faithfully,

Bath. R. WILBRAHAM FALCONER.

Bath, May 25th., 1853.

Dear Dr. Falconer,

I wish you would point out in "The Naturalist," the advantages which would result from the establishment of Public Museums in our large towns, and the consequent discouragement of the formation of Private Museums of Natural History, for the supply of which, with specimens of British Birds and their eggs, an unrelenting warfare is being carried on, which threatens the total extinction of many species, hitherto accounted common. A well-known bird-stuffer of this place tells me, that during the few years in which the rage for oology has become so general, many of our smaller birds have become every year more scarce. The formation of a good collection of British Birds in every large town, which might in most instances be easily effected by contributions from private collections already formed, would suffice for all the students of Natural History in their respective localities, and would tend to check that wholesale onslaught upon our feathered neighbours, which will shortly leave us but a few Rooks and House Sparrows upon which to exercise our ornithological observations. I add a copy of a note at page 294 of Mr. Barker's interesting book, "Lares and Penates," which I have recently stumbled upon.—"I cannot avoid making a few remarks here on the wanton destruction of life, which the mania for collecting eggs and birds to stuff has generated. At the late sale of the valuable and interesting Zoological Collection at Knowsley, many a rare animal was bought in order to kill and stuff it; and the exertions made in collecting eggs, an unfair practice and a morbid taste, will soon deprive us of many an interesting bird, unless put a stop to by the execration of public opinion, expressed on all possible occasions."

I am, dear Dr. Falconer, very truly yours,

WILLIAM LONG.

The Querist.

Is Guernsey to be considered, entomologically and ornithologically, as well as politically, a part of "Great Britain?" for, if so, our cabinets and collections might perhaps be considerably enriched by this "acquisition of territory."—F. O. MORRIS, Nafferton Vicarage, September 22nd., 1853.

BRITISH MUSEUM NATURAL HISTORY

LETTERS OF AN ORNITHOLOGIST.

(Continued from page 216.)

LETTER IX.

Iona, November, 1852.

My last ended rather abruptly, but yet I have very little more to add regarding our Iona quadrupeds; the only species that remain to be mentioned are the Common Rabbit, (*Lepus cuniculus,*) Long-tailed Field Mouse, (*Mus sylvaticus,*) the Otter, (*Lutra vulgaris,*) and the Seal, (*Phoca vitulina.*) As for the two latter, they are so shy, and so rarely to be seen, that one can scarcely make any observations upon their habits.

I have never discovered the nest of the Purple Sandpiper, (*Tringa maritima;*) but I have observed one or two pairs about the shores of Staffa all through the summer. Late in the month of June last, there was a pair flitting about the inner extremity of the great cave; on being disturbed they went off to the next cave, (the boat cave,) where they were shot by my companion.

I was very much amused by the account of your friend's adventure with the Heron, a beginning which promises great success, for it is not easy to circumvent old Long Shanks. There is a Gaelic saying—"One who has killed three Herons, three Geese, and three Curlews, may call himself a sportsman," so your friend has at least made one step towards acquiring that honourable designation.* I never have seen the Little Auk, so I suppose it is more a frequenter of the east than of the west coast; for if it ever came near us here, I could not have failed to have seen or heard of it. But the *Heron* is a

* In all my field and sea-side rambles I do not remember having had a more fortunate afternoon than fell to my lot on Saturday last. After shooting a Turnstone and a few smaller birds on wing, I was much surprised on observing a stranger hurrying towards me, and I set down the specimens, whose throats I had been plugging, seized my gun, and in another moment the arrowy flight was stopped, and the little traveller fell at my feet. It was a Little Auk, (*Mergulus alle,*)—the only specimen I have seen since 1846, when they were so abundant on our shores. After carefully stuffing his mouth, and wrapping him in a paper coffin, my attention was taken by an approaching squall. Suddenly it became dark, and the big boulders frowned as the tempestuous waves broke in succession on their backs. The tide was nearly full, and the feathered tribes were consequently obliged to keep near the grass, which made their capture all the more easy. A few Redshanks and Dunlins were coursing past, looking for shelter, and various other kinds might be seen anxiously struggling forward against the wind. A large Heron at length came in sight, beating his broad wings in apparent ill-humour at the storm. Down he dropped close to the beach, composedly reducing his size as he best could to resist the elements. His doom was however fixed.—I crawled forwards nearer and nearer, till he caught a glimpse of me as I approached. Up he started, spread his sails, and stretched his long stilts, uttering at the same time a dreadful shriek, which mingled with the roar of the breakers; and just as he was fairly on wing, I brought him down. He fell into the foaming waves with a broken wing; and without much hesitation I sprang in to secure him; but as I was on the point of seizing him, the brute turned round and showed fight gallantly. He flapped his huge wings, and screamed like a pig in distress—attempting now and then to strike at me with his bill; till at last the cold forced me to leave the water. The Heron was therefore left to come out of his own accord, which he did slowly and cautiously when a lull occurred in the sea; but when a big wave approached, he threw back his head and barked angrily at it, as if determined

very abundant bird in winter, and a very picturesque object. They roost, when the tide is full, upon some unfrequented rocks, where I have sometimes caught them napping. They have a very grotesque appearance then—a muffled-up ball of feathers, stuck upon the end of a single long stick; the head, one leg, and the bill, all entirely put out of sight, the bare extremity of the latter alone being protruded from among the long breast feathers. One spring I happened to meet with a Heron among the rocks at low water, who apparently had received some hurt, as he flew off with difficulty, and alighted again at a short distance. When I followed him I saw him gradually sink down into a sitting posture; on my nearer approach, his neck slowly was lowered down also, till it lay along the sea-weed; and as it was a low hollow rock, he thus rendered himself almost invisible, and would certainly never have been noticed by any one, who had not been all the time keeping his eye fixed on the place; however when I came quite close to him, and he saw that he had not escaped detection, he sprang up, and made a successful effort to fly off.

When a Heron has been sufficiently kept, though not so good as many other sea-fowl, it may be eaten cold; at least I do not see why we should be more fastidious than our forefathers, who thought it a sufficiently "dainty dish to set before a king."

The larger Gulls take a special delight in tormenting their sedate grey friend, whenever they catch him soberly traversing the air, going to or returning from his feeding-ground. The Gulls, with hoarse cries, make repeated swoops which, frightening the poor Heron out of his propriety, make him quickly change the dignified measured flappings of his great wings for a series of uncouth summersets through the air, by which he tries to escape their rude attack; at the same time furiously uttering his harsh screams, by which (could we understand the bird's language,) he probably threatens his assailants with police! prosecution, and all the terrors of the law! This continues till the Heron alights, or is driven far inland, or until the Gulls get tired of the sport.

The natural colour of the Cormorant's egg, as you are aware, is a sea-green, covered with a rough coating, of a dirty white substance, like chalk. This was very remarkable upon one specimen which I found in a nest, off which I shot the female bird. On dissecting it I found another egg just ready for laying—of a beautiful green, and pure colour, without a stain of white. Query. Is the coating of lime acquired after extrusion, or immediately before it? I

to go ashore at his leisure. Another wave came, and the same hoarse challenge met it from the half-immersed bird; until at last exhausted nature gave way, and a volume of surge washed the unhappy wader far on the beach. The matter did not end here; up rose the prostrate bunch of feathers, and away it stalked as majestically as the broken wing permitted. I was not, however, to be cheated, and at once accosted the marching ghost; then a row commenced—the Heron seizing me by the arm, or anywhere it could effectually aim a blow, till, by a lucky twist, I got hold of his neck, which secured me the victory. In spite of all his misfortunes he was still dangerous; so I tucked his body under my arm, throwing at the same time the neck over my shoulder to ensure protection against bites; and thus I marched home,—the Heron screaming lustily all the way. A more perfect caricature of that odious instrument, the bag-pipes, could not possibly be conceived.—W. Sinclair, Dunbar.

tried the edible qualities of one Scart's egg, the white of which, (excuse the bull,) was of a pale emerald green; and, on the whole, I should not recommend it as a delicacy.

A few days ago I took a little jaunt up to a large fresh-water loch, where I had an opportunity of watching some Grebes. The air was perfectly still, and the surface of the water like a sheet of glass. When at a distance from one another these birds frequently began to call until they met: this cry was a kind of *creek! creek! creek!* We chased several, which escaped by disappearing just as we made sure of their capture, and appearing no more. One went into a bed of reeds, through which we forced the boat, and succeeded in frightening him out into the clear water; but when the boat had got within forty yards of him, he rose upon the wing with great ease, and flew clear off to the other end of the loch.

LETTER X.

Iona, December, 1852.

Immediately after I had dispatched my last letter to you I went out for a short sail, and saw several Black Guillemots in various states of plumage, the whitest of which I shot; and on examination it reminded me of what I had forgotten to remark, that is, that the tail of this Guillemot, like its wings, does not change colour in winter, but remains black: this is only the case with the tail feathers, for the upper and under tail coverts change colour, becoming tipped with grey, or actually white.

I also killed a Great Northern Diver, weighing between eleven and twelve pounds. The day was very calm, and the water perfectly smooth. I and my companion observed a pair of these birds swimming together about two hundred yards from us, and two fishing-boats at the same time were rowing up towards them from the opposite direction. We accordingly lay quite still. The Divers let the fishing-boats come within about eighty yards, and dived with their heads towards us—a few seconds of keen excitement—and the monsters emerged thirty yards the other side of us, having passed underneath our boat. One dived again the moment it got its head above water; but the other one seemed to be slowly sinking down in a very curious manner, so that there was nothing appearing but its head when I fired. The splash caused by the shot subsided, and there floated his huge hulk, *belly up*. We saw several more Great Northern and Black-throated Divers during this short sail, but had not time to go after any more, though I am sure they would have allowed a near approach. It is said that the appearance of these birds prognosticates bad weather: at any rate it blew a hurricane that night and the next two days.

I regret that a dog got access to the specimen which I intended sending to you, and bit its head off, so that it is useless. It was in poor condition, and changing its plumage. The wings are still spangled with white stars, but

on the back the plumage is mostly greyish black, although there are a good many black feathers remaining with the double white spot at the extremity. It is worthy of notice, as shewing the manner in which they lose these handsome ornaments, to remark that as one of us was stroking his hand along the back of the bird, we observed several of these white spots drop off like flakes of snow, breaking off from the feathers, of which they formed a part. It was this peculiarity which made me wish to forward the specimen; and I think I will yet preserve the skin of what remains. There was nothing remarkable about the head and neck, which had completely assumed the winter plumage.

(*To be continued.*)

ON THE MIGRATION OF THE QUAIL, (*COTURNIX DACTYLISONANS.*)

BY THE REV. W. W. COOPER.

CERTAIN questions connected with the migration of the Quail, (*Coturnix dactylisonans,*) being still involved in considerable obscurity, I am induced to lay before the readers of "The Naturalist" the present state of our knowledge on the subject, in the hope of exciting others to such further observations as may improve our knowledge of this interesting little bird. I will take up the history at the beginning, as that will shew what progress has, in modern times, been made in accurate observation, though, as we shall presently see, there is still much room for improvement.

Pliny tells us, (I quote from the translation of Philemon Hollond, published in 1635,) "But since we are entred into this discourse of those foules that make voiages by whole flocks over sea and land to see strange countries, I cannot put off to speak of lesser birds also, which are of the like nature. For those before named may seeme in some sort to be induced to such great travell, so bigge they are of bodie, and so strong withall. As touching Quailes, therefore, they alwaies come before the Cranes depart. A little bird it is, and whiles she is among us here, mounteth not aloft in the aire, but rather flieth below neer the ground. The manner of their flying is like the former, in troupes: but not without some danger of the sailers when they approch neer to land. For oftentimes they settle in great number on their sailes, and then perch, which they doe evermore in the right, and with their poise beare downe barkes and small vessels, and finally sinke them. The Quails have their gists, to wit, ordinarie resting and baiting places. When the south wind blowes, they never flie: for why? it is a moist, heavy, and cloggie wind, and that they know well ynough. And yet they willingly chase a gale whensoever they flie, by reason their bodies are too weightie (in comparison of their wings,) to beare them up, and besides their strength is but small. And hereupon it is that as they flie, they seem by their manner of crie, to complaine, as though they flew with paine. Commonly therefore they

choose a northerne wind to flie with; and they have one mightie great Quaile, called Ortygometra, to lead the way, and conduct them as their captain. The formost of them, as he approacheth neere to land, paieth toll for the rest unto the Hawke, who presently for his welcome preieth upon him. Whensoever at any time they are upon their remoove and departure out of these parts, they persuade other birds to beare them company, and by their inducements there go in their train the Glottis, Otis, and Cyehramus. * * *

* * But to return to our Quailes aforesaid. If a contrarie wind should chance to arise and begin to drive against them, and hinder their flight; to prevent this inconvenience they are well provided. For they flie well ballaised, either with small weightie stones within their feet, or els with sand stuffed in their craw: the seed or grain of the White Elebore, (a very poison,) they love passing well, and it is their best meat. But hereupon it is, that they are not served up as a dish to the table. Moreover they are wont to fome and slaver at the mouth, by reason of the falling sicknesse, unto which they only of all other ereatures, but man again, are subjeet."

Such is the amusing aceount Pliny gives us of the migration, etc., of the Quail. The information Gould affords on this subjeet is seanty. He says, "In the British Isles the Quail is more sparingly dispersed, arriving in spring as soon as the tender corn is of sufficient height to afford it shelter, and remaining with us till it has performed the duties of incubation."

Yarrell is more full in his account; he tells us that the Quail arrives in this country in May; that the males come before the females; and that the greater portion leave us in October. He also says, "this bird has generally been considered as a summer visitor only to Great Britain; but so many instanees have latterly been recorded of its occurrence in Ireland in partieular, as well as in England, during the winter months, as to make it appear that a portion of them do not return south in autumn."

Macgillivray agrees with Yarrell in fixing the time of their arrival to be May, but differs from him by dating their departure in September.

It is however to the latter part of Yarrell's aecount that I wish to draw attention. In the "Zoologist," I find several notiees of the occurrenee of the Quail in winter. At page 361, after stating that he saw one on East Ilsley Downs, February 12th., 1840, the writer, Mr. W. Hewitt, informs us that he has heard his father say that he has caught Quails under sieve-traps in severe weather about Christmas, at Spodon, in Oxfordshire.

Page 871.—Quails were seen near Cambridge in November and December, 1844.

Page 1299.—A Quail was killed at Shiffnal, Salop, Deeember 20th., 1846.

Page 1367.—A Quail was killed at Topham, in Cambridgeshire, at the end of January; and two were seen in a poulterer's shop at Bury St. Edmunds, in February, or the beginning of Mareh, 1846.

I have one more instance to add, which came under my own observation. On the 1st. of last February, my brother shot a Quail in the parish of

Normanby-by-Spital, in this county. It was in a small piece of reaped stubble, on a strong, cold, wet, clay soil, where I had seen it a few days before, but was unable to get a shot at it.

I find in the "Zoologist" two theories to account for the occurrence of the Quail in winter. One writer supposes that the bird he saw had been wounded, and was consequently unable to join the migrating flock. Another writer suggests that, as at the time he saw a Quail, there had been no severe weather, the mildness of the season might sufficiently account for a bird being left behind.

With regard to the bird I saw killed last February, it had *no* appearance of having been wounded. Up to that time the weather had been remarkably open; but within a fortnight set in that snow-storm, which will be remembered as the severest which has occurred since 1814.

The points of observation which I would suggest, as being most likely to clear up the doubt attending the occurrence of a few stragglers in winter, are these:—The precise date of their being seen; whether the specimens are male or female; whether the birds appear to have been wounded or not; whether there is any reason to suppose they are travelling at the time they are observed, or whether they seem to be in winter quarters; their condition; the general character of the season; and the nature of the soil and cover in which they are found. A few accurate observations on these points would, I think, go far to solve the questions—Whether the Quail is to be classed as a partial migrant? or, whether those few that stay with us in winter, do so from some physical inability to join in the general migration.

I have endeavoured to set out a correct account of our knowledge, and its progress, of the migration of the Quail; and if by your kindness in publishing it in "The Naturalist," it succeed in directing attention to the cause of a few not migrating, at all events not joining in the general migration, I shall hope to have done something towards clearing up the main point, on which I think information is wanted with regard to the habits of the Quail.

Rectory, West Rasen, Lincolnshire, August 27th., 1853.

EGGS OF THE REED WARBLER, WHINCHAT, WHEATEAR, ETC.

BY STEPHEN STONE, ESQ.

Mr. C. W. Brown's assertion, contained in last month's number of "The Naturalist," vol. iii., page 136, in reply to a query by a correspondent in a previous number, that "the Reed Warbler's egg is precisely like the Blackcap's, but rather larger," should be received with caution. How close a resemblance there may be between the eggs of these two species found in his neighbourhood, is a point upon which I am not in a condition to speak, and therefore shall not presume to do so; but between those produced in this locality, the resemblance is by no means striking. The egg of the Reed Warbler, (*Salicaria*

arundinacea,) is with us rather the smaller of the two; I have always found it tinged and spotted with green, in which respect, as well as in size, it more nearly resembles the egg of the Garden Warbler, (*Curruca hortensis.*) There is, I know, considerable diversity of opinion in reference to the eggs of the Garden Warbler and those of the Blackcap, *(Curruca atricapilla:)* thus Mr. Hewitson, in his "Coloured Illustrations of the Eggs of British Birds," says, "it was my belief that the eggs of the Garden Warbler, although in some of the varieties resembling those of the Blackcap, were usually to be distinguished from them by their more beautiful and bright colouring. Mr. Henry Doubleday, of Epping, upon whose authority I have the utmost reliance, assures me that the reverse is more frequently the case; 'that the eggs of the Garden Warbler are generally smaller than those of the Blackcap, and never so bright in colour,' but that the two often approach each other." "Who shall decide, etc." The principal marks of distinction which have presented themselves in the specimens I have hitherto found are these:—the eggs of the Blackcap are rather larger, and more oblong in shape, than those of the Garden Warbler, while the eggs of the latter are more or less tinged with a greenish colour, which I have never yet observed in those of the former.

Mr. Brown goes on to say "The Whinchat's egg is a pale blue, precisely like the Hedge Warbler's, the Redstart's, and the Wheatear's, between which there is such a resemblance, that, if mixed, they could scarcely be identified again." Now the eggs of the Whinchat, (*Saxicola rubetra,*) which I have procured, instead of being "a pale blue," are of a beautiful dark greenish blue, and mostly speckled with pale brown; it may be that in some specimens this latter characteristic is wanting, and in such cases it would be exceedingly difficult to distinguish them from the eggs of the Hedge Warbler, (*Accentor modularis.*) The egg of the Redstart, (*Phœnicura ruticilla,*) may be distinguished by its smaller size. The eggs of the Wheatear, (*Saxicola œnanthe,*) are indeed "a pale blue;" I have many specimens, and those not faded ones from exposure to the light, or from the length of time I have had them, but specimens of precisely the same colour as they were when newly laid, of as pale a blue as a mixture of chalk and water, or, which I need hardly observe is one and the same thing—London milk; this, together with their larger size, will serve in most instances to distinguish them from the eggs of the Hedge Warbler, with which they are most likely to be confounded.

I agree with Mr. Brown, in recommending all who may feel desirous of forming a collection, to "collect their own eggs" as far as may be practicable, since there are many species, which, if mixed together, there would be less chance of identifying again than those he has mentioned; and besides, eggs will occasionally be met with, the colour, markings, and the whole appearance of which, instead of being a guide to us in deciding on the birds that produced them, have just the opposite tendency; being directly calculated, like an *Ignis fatuus*, whether natural, moral, religious, social, or political, to mislead, so that it would be utterly impossible for any one except the person who

took them, to tell with certainty, to what species of bird they belonged. I have several of this character in my collection, which would sadly perplex the most experienced oologist in his attempts to assign them

"A local habitation and a name."

Brighthampton, July 2nd., 1853.

SOME ACCOUNT OF THE LEPIDOPTERA ROUND EXETER.

BY MR. E. PARFITT.

(Continued from page 253.)

Orthosia lunosa is not a common insect, and it is very rarely to be taken in good condition, the specimens are generally rubbed or the wings torn; this species should have been placed before the Copper Underwing; *Scotophila Tragopoginis*, (the Mouse,) is a rare moth, I have only seen one specimen; *Nœnia typica* is also very scarce, only two or three have been taken that I am aware of. *Xylina rhyzolitha* is rather a common insect; *Xylophasia characterea* is a scarce moth; I reared four from chrysalides found in my garden in 1851, and I have not heard or seen any since. *X. lithoxylea*, (Light Arches,) is also rare, at least only one or two have come under my notice. *X. polyodon:* several specimens of this moth are to be taken during the summer months. *Apamea didyma* is a common species about this neighbourhood; *Mamestra oleracea* is much too common, or at least the caterpillars are; and *M. Brassicæ* is another much too plentiful. *Xylocampa Lithorhiza* is a rare moth, I have only taken one specimen, and have only heard of another being taken hereabouts; the *Lychnis* has been taken here by Mr. G. Norcombe, but I have not met with it myself; *Polia flavicincta* is a scarce insect, I have only taken one specimen in 1849. The beautiful little moth, the Peach Blossom, has just been captured here at Parker's Well House, by the gardener, Mr. Bicknell: he brushed it out of a currant bush in the garden. I believe it to be the first which has been taken in this neighbourhood, but I hope it will not be the last. Another beautiful and rare moth I took myself at Coaver, July, 1851. The Coronet, (*Acronycta Ligustri.*)—I have not heard of another specimen of this beautiful species having been taken here. *Acronycta Rumicis*, (Knot Grass,) is not very common, though many specimens are to be taken during a season.

Another very beautiful species, the Marbled Green, (*Bryophila glandifera*,) is rather plentiful on the Topsham road. I have found many of them sitting on the wall early in the morning near Exeter. What do the caterpillars of this insect feed on? is it mosses or lichens, or what? The Dun-bar, (*Euperia trapezina*,) is about equal in its appearance to the Marbled Green. *Xanthia citrago* is not a common insect, though I have taken several specimens, but mostly on the west side of Exeter in meadows, or at least by the side of hedges between St. Thomas and Foxhays. The Herald is particularly plen-

tiful. The Pale Mottled Willow, (*Caradrina cubicularis,*) has been taken by Mr. G. Norcombe, but it is very rarely to be met with. The Angle Shades is an abundant species. *Cucullia Scrophulariæ* is very rare. I have not heard or seen any except one which I possess; it is a fine specimen, which I reared from a caterpillar found feeding on *Scrophularia aquatica,* by the side of the canal, July 19th., 1852, and it went into the chrysalis on the 22nd. of the same month. *Cucullia Lychnitis* has been taken by Mr. G. Norcombe, but it is rare. The Shark, (*C. Umbratica,*) is also a scarce species: I have only taken one specimen.

The Spectacle, (*Abrostola Urticæ,*) is a very rare insect; the specimen which I possess I bred from a chrysalis—it came out May 29th., 1853. *Plusia Gamma:* the caterpillars of this moth are very injurious to many of our cultivated plants, particularly Mignionette and Scarlet Geraniums. We had a bed of Tom Thumb Geraniums very nearly destroyed by them two years ago. I have not seen them so plentiful since, neither do I wish it. *Plusia Iota* is rare, I have only seen one specimen, which I took in my garden. *P. chrysitis* is also rare; only one or two have been taken that I can hear of. The Small Yellow Underwing, (*Noctua arbuti.*)—This beautiful little moth is of rare occurrence. I took one this year, in June, in some meadows near Wonford: there were two of them flying about amongst the grass, but I could not take them both. *Phytometra Œnea,* (Small Purple Barred,) is another very beautiful moth, not very common, though you may take several on Haldon in the summer months. The Old Lady, (*Mormo maura,*) is tolerably abundant. The Old Lady is now to be met with flying about sometimes in the streets of Exeter, but most frequently about the outskirts of the city, about ten or eleven o'clock at night. *Catocala Nupta* was taken here on one of the locks of the canal two years ago.

Mother Shipton, (*Euclidia mi,*) is a scarce insect, only one having been caught, and that was taken on Haldon, in 1851, by Mr. Bicknell. *Fidonia atomaria* is particularly abundant on Haldon in July. *Halia Vauaria,* (V. Moth,) was tolerably plentiful in 1851-52, but I have not seen a single specimen since. This season is one of the worst for the entomologist that has occurred for many years; I suppose it is from the quantity of wet we had this spring, which no doubt drowned a great number of chrysalides buried in the ground. *Hybernia defoliaria* is not a common moth, as I have only seen three specimens—these I took last year. *Phigalia pilosaria,* (Pale Brindled Beauty:) I have only caught or seen one. *Biston Betularius* is scarce—two or three specimens only have been taken. The Oak Beauty is exceedingly rare, indeed it is as rare as it is beautiful. I have only heard of one being taken, it was caught at Miss Gifford's Parker's Well House, 1852. The Scalloped Hazel: I took several specimens of this moth in 1850, and have only seen one since. The September Thorn, (*Geometra erosaria:)* several of this moth I have taken. *Geometra illunaria* is a very common species.

(*To be continued.*)

CAPTURES OF LEPIDOPTERA.

BY ROBERT S. EDLESTON, ESQ.

Erebia Cassiope.—I captured several specimens on Sty Head, near Keswick, on the 25th. of June: this species varies considerably.

Crambus Lapponicellus occurred in some plenty on the summit of Skiddaw, but few fine. I was amused at the highest point to see a very fine *Pontia Brassicæ* fly past in first-rate style.

Ephippiphora Turbidana.—Several specimens taken near Manchester, end of June, secreted in the *dry leaves* of *Tussilago Petasitis.*

Plusia Bractea.—This splendid Moth has occurred in tolerable abundance near Macclesfield. They are taken at night on honey-suckles in July. Some of the specimens have a *bright yellow fungus*, hatchet-shape, about one-sixteenth of an inch in length, growing out of the eyes, giving the insect a strange appearance. I do not remember observing anything of the sort previously in my collecting.

Arctia Caja.—I possess a fine bred variety; upper wings all *chocolate*, the lower wings *black*, usual black spots shew through in *purple.* I bred a male this season—lower wings *are dissimilar*, the right side being nearly suffused with black, and a small space in orange; the left side less suffused, and more orange.

Œcophora Curtisella.—I met with this species in great abundance, in July, on Broughton Park palings—all the varieties from black and white to jet black.

Smerinthus populi.—A beautiful variety of this species was bred here this season; the whole of the insect being suffused with the pinky hue, seen on the wings of *Ocellatus.*

Manchester, August 5th., 1853.

A BOTANICAL RAMBLE ALONG THE BEACH FROM BRIGHTON TOWARDS SHOREHAM.

BY J. E. SMITH, ESQ.

(Continued from page 250.*)*

Liquorice is obtained from the root of *Glycyrrhiza glabra*, not a native of this country, though *Astralagus glycyphyllus*, (the Sweet Milk-Vetch, or Wild Liquorice,) is not uncommon in calcareous soils, and contains a considerable quantity of sweet juice in its roots and leaves. The manna alluded to is derived from a plant of this order that grows in Persia; but the manna of Mount Sinai is obtained from a variety of *Tamarix gallica*, a shrub which is very common in the squares of Brighton, and occasionally as a fence. You may have observed it at Hove and many other places on the coast; it is a doubtful native, and belongs to the order *Tamaricaceæ.* If we now go out

towards the sea, where the herbage is more scanty, and the pebbles predominate, we shall find a number of interesting plants. This straggling shrub, with flowers like those of a potatoe, its young shoots with an odour of musk, is *Solanum Dulcamara*, (Common Nightshade, or Bitterswect, as its Latin name implies;) it belongs to a most dangerous and suspicious family, the *Solanaceæ*, famous for their narcotic properties; the Henbane, *Hyoscyamus niger*, *Atropa belladonna*, Tobacco, *Nicotiana*, the edible Tomato, and Egg Plant, both *Solanums;* the potatoe, etc., are of this order; these however are only wholesome when deprived of their poison by heat. The juice of *A. Belladonna* is well known to produce dilatation of the pupil, and the leaf applied to the face relieves the tooth-ache. The fruit of *Solanum dulcamara* and *S. nigrum*, to be found on rubbish everywhere, are very poisonous: one species of *Solanum*, the *Burabura*, in Demerara, is said to be an antidote to the bite of the Rattle-snake.

But here is *Geranium Robertianum*, (Herb Robert;) it is the small variety *β* of Smith, and very pretty it is with its red stems, elegant leaves, and purple flowers. *Geranium dissectum* and *molle* are also plentiful, but chiefly on the banks near the road, together with *Erodium cicutarium*, (Stork's Bill,) with finely-divided pinnatifid leaves; a plant of the same natural order *Geraniaceæ*, so much cultivated by florists;—the ornament of every garden and cottage window. That almost microscopic plant is *Myosotis collina*, a small Forget-me-not or Scorpion Grass, distinguished by its brilliant blue flowers that do not expand till by the unrolling of the raceme each is in its turn brought into a perpendicular position. It is of the order *Boraginaceæ*, to which also belongs this rough-looking plant, not yet in bloom, *Echium vulgare*, (Viper's Bugloss;) it will soon decorate the beach with its racemes of handsome flowers, at first reddish purple, then turning to a brilliant blue and sometimes white. The *Cynoglossum officinale*, (Hound's Tongue,) belongs to the same order; it is found nearer the road and on the banks in great plenty; you may know it by its dingy purple and funnel-shaped blossoms, its fœtid musty smell, its soft downy elliptical leaves, and its height about two feet.

The Borage, (*Borago officinalis,*) gives its name to the order. I have observed it in the neighbourhood of Cosham, near Portsmouth; it is a rare plant, and partial to calcareous soils, though not found in this district. It was formerly used as an ingredient in a sort of summer punch, called *cool tankard*. This dark shining plant, with its dense heads of green flowers, *Beta vulgaris*, (Common Beet,) that seems to rejoice in the barren soil, belongs to the order *Chenopodiæ*, of which there are many species in the neighbourhood of Brighton; for instance, a little further on, covering the mud of the harbour with its white powdery branches and leaves, is *Atriplex portulacoides*, on the leaves of which grows the sea-weed *Rhodomela scorpioides*, and in its neighbourhood is plenty of *Salicornia herbacea*, and the rarer species of *S. radicans* —the two Glassworts: they are sometimes pickled for Samphire, (*Crithmum*

maritimum,) a plant of the order *Compositæ*, found on roeky eoasts as at Dover.—

> "Half way down
> Hangs one that gathers Samphire—
> Dreadful trade!"

The *Salicornia* has a very salt taste, and from the ashes a fossil alkali is obtained, useful in making soap and glass; in faet the whole of this genus yields a vast quantity of soda. Here also is that ornament of the Downs, *Euphorbia officinalis*, (Eyebright;) you must admire the small but elegant blossom streaked with purple, and just a dash of yellow. Withering says it was formerly in repute as a remedy for impaired vision; but he adds it will not grow unless surrounded by plants taller than itself, from which I must dissent, as I have found it on the Downs with nothing near it but the short grass, not half its height. The Whitlow-grass, (*Draba verna*,) that enlivened the dreary beaeh in the month of March with its myriad tiny white blossoms is gone. *Cerastium vulgatum* and *tetrandrum*, all early plants, may still be found in blossom both here and on the road-side; they belong to the order *Caryophyllaceæ*, the same as the pinks, thrift, etc., and have but insignificant white flowers, and would scarcely be noticed at this time of the year among their brilliant neighbours. To the same order belong *Silene maritima*, stretching over the shingle, and *Silene inflata*, (Bladder Campion,) that grows on the banks and on the hedges everywhere; *Lychnis vespertina*, (White Robin,) growing in the same situations; *Spergula arvensis*, a purple plant with white flowers; *Stellaria Holostea*, with its elegant grassy leaves and large white star-like blossoms, growing among the grass on the eliff with its relations, *Stellaria Graminea*, (Lesser Stitchwort,) and *S. media*, (Common Chiekweed,) which makes itself at home in every situation.

Let us now return to those rugged cliffs, from ten to twenty feet in height, in some places almost perpendicular, where the red elayey soil shows itself in agreeable contrast to the long grass that covers the more sloping parts. Here and there the ground is broken by a winding footpath, leading up from the beaeh to the highroad, that runs along its top. Two or three solitary houses stand at the bottom, and in their immediate neighbourhood are a few mud huts, built by the navvies employed in making the ship canal from Shoreham. On our left is the salt marsh, soon to be eonverted into doeks with quays and warehouses; beyond it the eanal and Shoreham harbour; behind us is the roar of the sea, itself concealed from our sight by the high bank of shingle. No doubt at one period the sea or a river washed the foot of those cliffs with their rugged and precipitous sides, and at a still more distant one those same eliffs extended mueh further to the south, keeping back the sea to a greater distanee, probably than it is even now; for here was once the mouth of the Adur, and here the famous *Portus Adurni* of the Romans. Yes! this silent and unfrequented spot was once a busy seene, where commeree poured her wealth into the laps of hundreds, while thousands pined in misery. Here

were conflicting interests of man competing with his fellow-man, and though they had begun to learn the new commandment, each was striving 'to o'ertop his neighbour' in the unhallowed lust of gain.

Behold that merchant hurrying along the quay, attended by a crowd of clients and slaves.—He is a citizen of the 'mighty mistress of the world,' he hastens to learn the fate of his 'Argosies' that are expected from Rome, Sicily, or Alexandria, laden with corn or the rich spices of the East. You would think the world's fate depended on the success of his speculations; and yet this man with all his fellow-citizens, the very town itself, nay the vast empire, of which it was but an insignificant part, the whole framework of society and form of civilization that existed in his time, and which was deemed imperishable, have all disappeared;—they have been swallowed up in the centuries as the flake of snow is dissolved in the ocean: nothing remains but that eternal precept, "Do unto others as you would have others do unto you."

Yet again, after thirteen centuries, a similar scene is about to be enacted on the very same spot; the same conflicting interests; the same vices, follies, and miseries, all however destined to perish as before, leaving behind nothing but that everlasting principle of charity, until it, and it alone, be acknowledged in every act of life to be the ruling principle of man; and all the while, as the ages roll on in their steady, silent course, these little flowers come forth every season to perform their humble part in the great scheme of the universe, admonishing us mortals to perform each our allotted work with all humility and faithfulness.

But here we are at the foot of the cliffs, let us scramble up the sides and gather the Wild English Clary or Sage, (*Salvia verbenaca,*) which, with the flowers already mentioned, has found a settled habitation on this bank. It belongs to the order *Labiatæ*, but differs from all the other British genera of this order except *Lycopus*, in having only two stamens. The other *Labiatæ*, growing in the neighbourhood, are *Ballota nigra*, not yet in flower, *Lamium album* and *purpureum*, *Thymus serpyllum*, (Wild Thyme,) and *Stachys sylvatica;* and of the allied order, *Scrophulariæ*, we shall find *Veronica chamædrys*, *Serpyllifolia officinalis*, *agrestis*, and *arvensis*. The first is called Bird's-eye: it is that beautiful blue flower so brilliant in the hedges during May and June. The name *Veronica*, according to Hooker, is derived from two Greek words, signifying the sacred picture, as the flowers, like St. Veronica's handkerchief, were supposed to bear a representation of our Saviour's countenance. From this spot we may see growing in the mud, together with *Atriplex portulacoides*, the green leaves of *Aster tripolium*, a plant that, according to Linnæus, is eaten by horses and goats, but not by other cattle; it belongs to the order *Compositæ*, a very extensive and most natural order, containing the Dandelion, Hawkweed, *Centaurea*, and many others too numerous to be mentioned.

Having now enjoyed the fresh sea-breeze, the enlivening prospect, the

flower-bespangled earth, and collected a magnificent nosegay of every hue, we may return by the train, or if we prefer the walk along the road, we shall be well rewarded by the distant view of Brighton, the sea and the cliffs beyond Kemp Town, resplendent with the setting sun and stretching out bay beyond bay as far as Newhaven, Seaford, and even to the summit of Beachy Head.

17, *Cannon Place, Brighton, September,* 1853.

NOTES ON THE SOMERSET MARINE ALGÆ.

BY MISS ISABELLA GIFFORD,

Author of "The Marine Botanist."

The vegetation of our seas has of late years occupied more and more the attention of Botanists. No longer are the Algæ classed along with the Lichens as formerly, but their delicate structures have been carefully examined in all their microscopic details, and these close investigations have afforded an intimate knowledge of their organization, upon which has been based the improved classification now in use. In this present paper it is not my intention to enter into any of these details, but to lay before the readers of "The Naturalist" the result of my explorations on this coast, one that, until I proved to the contrary, was considered to be entirely destitute of any but the very commonest species. I cannot agree with an eminent Geologist who has said, "There is scarce a chain's length of the shores of Britain and Ireland that has not been a hundred times explored by the Botanist." I believe that there are still portions of our coasts which, at least, have received but a very superficial examination, and I trust collectors who peruse these notes will be encouraged to investigate with care any unrecorded locality which may fall under their notice. My first visit to Minehead beach in 1848, yielded me specimens of the beautiful and rare *Nitophyllum Versicolor*, known from others of the genus by its changing rapidly from rose-colour to a bright orange when placed in fresh water. This sea-weed is very local in its distribution, and appears unknown to continental Botanists; on our shores it has only two other localities besides this, namely, Ilfracombe, where it has long been known; and Youghal, on the south coast of Ireland. At none of these stations has it ever been found growing. I should surmise, however, from the very fresh state in which it is often cast ashore at Minehead, that its place of growth cannot be far distant; probably vegetating attached to shells or corallines in deep water. The time for collecting this plant is from June to the end of August. In the beginning of the season the plants are small, and without any appearance of the hardened substance that arises at a later period at the apex of the stem and the ends of the frond; these, when mature, are found to contain minute grains; no fructification, except these bodies be such, has yet been detected. From *Nitophyllum Bonnemaisoni*, another uncommon kind which I find drifted on this beach, it may be known by the *entire* absence of any

veining; and under the microscope by the larger size of the cellules. *Nitophyllum Bonnemaisoni* is frequently found in fruit, and its habitat is on the stems of *Laminaria digitata*.

In the beginning of August, 1848, I was so fortunate as to meet with the *Stenogramme interrupta*, one of our rarest sea-weeds, which had been discovered in November of the previous year, on the shores near Plymouth, by the Rev. W. S. Hore, and Dr. John Cocks; its only other known station then was at Cadiz; but it is now found to be a native also of the shores of New Zealand. The primary fruit is contained in a raised line, which traverses the centre of each division of the frond, and when this is present it is easy to recognise the plant; the secondary fruit, consisting of tetraspores, forms roundish dots on the frond: these I first discovered on Minehead specimens, and plants with this description of fruit have not been found at Plymouth, nor, I am informed, has a scrap of the plant been met with for two seasons there. This species inhabits deep water. One single plant, with tetraspores, has been obtained by the dredge in Cork harbour by Mr. Caroll.* On Minehead beach the young plants are to be found in June; and in the following November and December they attain to their full growth. Collectors who may visit the opposite shores of Wales will do well to look for this and other species herein noticed.

On the Somerset coast I have enumerated eighty different species of Marine Algæ;† nearly one-half of these may be collected in their customary places of growth—on rocks, stones, etc., and in pools left at ebb tide; probably were the dredge employed, many more kinds might be discovered; and specimens thus obtained are generally in a state of much better preservation than those floated ashore after being battered about by the waves. *Grateloupia filicina*, a rare species, grows on the beach at Minehead; and, with the exception of Aberyswith, this is the northernmost limit for the plant in Britain.

Ceramium flabelligerum, which I find growing at Blue Anchor, and on wood-work in the sea at Minehead, though marked as "rare" in the works of Professor Harvey, will, I think, prove to be very generally distributed on the shores of the British Isles. I have received specimens of it from many different localities. By the naked eye it is scarcely to be discriminated from the common *Ceramium rubrum*, but the colour is more like that of *Polysiphonia fastigiata*, a plant that grows abundantly on the fronds of *Fucus nodosus;* microscopically, *C. flabelligerum* is known from others of the genus by the *unilateral* spines, which arm the outer side of the branches, and the *opaque* articulations distinguish it from *C. acanthonotum*, a species set with spines in the same manner, but with *transparent* articulations. *Callithamnion*

* A young specimen of *S. interrupta* has been found by my Mother in June of the present year 1853 on the beach at Lynmouth, North Devon; this locality affords several interesting species.

† In the Somersetshire Archæological and Natural History Society's Museum at Taunton, there is a collection, which I presented to that Society, containing well-fruited examples, with only one or two exceptions of all the Algæ entered in the list that accompanies the volume.

Borreri grows along the coast on rocks and wood-work; it vegetates on the former as high up as Clevedon. At Blue Anchor the plants of it are larger, and grow upon mud-covered rocks; this and *Callithamnion Rothii*, are the only indigenous plants of the genus I have seen on the Somerset coast. Like the land Flora, the Marine approaches to that of the adjoining county of Devon; and all the rarer species are such as are confined in their range to the southern coasts of Great Britain and Ireland.

October, 1853.

NOTES ON THE LOBSTER.

BY WILLIAM THOMPSON, ESQ.

In the September No. of "The Naturalist," Mr. Jackson, of East Looe, inquires, "What becomes of the young Lobsters and Crawfish, previous to their attaining a marketable size?" and he states that although the old ones are commonly taken in spawn, the young are never seen.

This question I can answer. If Mr. Jackson will turn to the "Zoologist" for February, in this year, page 3765, he will find a description of a young Lobster, measuring only nine lines in length, which I caught on the 18th. of August, 1852, in from five to seven fathoms of water, off Redcliffe Head, in Weymouth Bay, whilst dredging over a bed of *Rytiphlæa pinastroides*.

I had drawn out a very full specific description of it, not knowing at the time but that it might be a new species closely allied to the Lobster. Having sent it to Dr. Gray, he decided it was the young of the Lobster.

The most apparent difference between it and the adult Lobster consists in the much shorter antennæ, the more slender and more equal anterior legs, the wider rostrum, and the more acutely triangular plates of the segments.

Lobsters are caught by means of pots, made of withys, with the bars some little distance apart, or in nets; in either case the bars of the pot, or the meshes of the net allow all but such as are of a marketable size to pass; and as Lobsters lay amongst rocks where no net can reach, they are safe from all danger, except what they themselves run into: this is the reason that the young are so seldom seen.

In the months of August, September, and October, pots are laid down for Prawns, (*Palæmon serratus*,) and then we sometimes obtain small Lobsters. The Prawn-pots are made precisely the same pattern as the Lobster-pots, but smaller, and the open bars closer together, in order to prevent the egress of the Prawn—this also prevents the escape of the Lobster.

There are now in the Aquavivarium of the Zoological Society five Lobsters, which I have sent from here: all of them were obtained in Prawn-pots; the smallest is four inches in length, and the largest about five.

These facts answer the question of Mr. Jackson.

As to the Crawfish, we get them very seldom, and never very small—the youngest I have seen was about eight inches in length. The Crawfish frequent places where Prawn-pots are never set.

The five Lobsters, mentioned before, were kept some time in a perforated box, moored in the tideway; in this box was also placed *Cottus bubalis*, and some specimens alive of the *Solenette Monochirus linguatulus*. Some days after, on opening the box, I found nothing but some remains of the *Solenettes*. On putting some more specimens in the box I took out the *Cottus*, believing them to be the evil doers, especially as a day or two previous, having missed several *Syngnathi*, I found one coiled away in the stomach of a *Cottus*, giving its destroyer a very extraordinary appearance.

With all my precautions still the *Solenettes* disappeared, and I succeeded in tracing home the crime to the Lobsters, one of which I caught—*Flagrante delicto*. Having covered so much paper with what I at first intended to comprise in a few lines, I will make a clean breast, and at once commit all my knowledge of the Lobster to paper.

The following show the large quantity exported from Norway from 1815 to 1835; it is taken from a book, entitled "Norway and the Norwegians," by R. G. Latham:—"From 1815 to 1835 there was exported from Norway the following quantity of Lobsters, in round numbers:—1815 to 1819, six hundred and five thousand; 1820 to 1824, nine hundred and twenty-seven thousand; 1825 to 1829, one million, three hundred and twenty thousand; 1830 to 1835, seven hundred and eighty-four thousand; making a grand total of three millions, six hundred and thirty-six thousand."

A single Lobster costs in Norway three-halfpence; a trifling duty is laid upon them when they leave the country. The London market chiefly monopolizes the supply. The Norway Lobster season is in the winter; they then bite more freely: they are not caught in June. This differs from the times Lobsters are caught in this part of the coast. The Portland and North Shore Lobster-catcher prepares his pots about March, and continues them as long as the weather will permit—that alone deciding him when to bring his pots ashore. Warm and fine weather are here necessary to the success of the Lobster-catcher.

Here, as elsewhere, the colour of the Lobster varies very much; and the fishermen can tell by the colour whether it has been caught off Portland or the North Shore, distant about eight miles from each other.

The Norway Lobsters are purchased before they are caught. They pass the time between capture and embarkation in flat tanks, pierced with holes, and half sunk, lying off the neighbourhood of Laurvig; in this manner they wait weeks, and even months before they are shipped for market.

The Norway Lobsters are smaller than those which are caught on the English coast; they also vary much in colour, some being of a light blue, or occasionally one side is black, whilst the other is white—this is a rarity. They fight a great deal amongst themselves: hence the great number of one

clawed Lobsters we see on the fishmongers' stalls.

Lobsters are naturally voracious, but "during their confinement," says Mr. Latham, "they eat nothing;" my experience tells me they will eat if they can get food; but they are generally packed close with no food, so that they have no opportunity of following their inclinations. Any judge of a Lobster can tell whether it has been fresh caught, or if it has been caught some time and kept in a preserve. When they have been kept some time, the epicures portion, commonly called the dressing, suffers both in quantity and quality, and the creamy substance round the abdomen and claws is wanting.

Females in spawn placed in the tanks are said to remain so; this may happen from the altered condition of the temperature of the water: it cannot arise from the will of the adult any more than could the hatching of the eggs be interfered with by the moth or butterfly. An export duty is paid before they leave Norway.

When they arrive in the Thames all the dead ones are thrown overboard, as it is illegal to land them. Besides Laurvig, Christiansand and Bergen have a large share in the Lobster trade.

Mr. Bell states in "British Crustacea," a curious story respecting the strong affection of the Lobster for its young.—One man told Mr. Peach that he had noticed the old Lobster with her head peeping from under a rock, and the young ones playing around her. She appeared to rattle her claws on the approach of the fishermen, and herself and young took shelter under the rock. Thus far is quite credible, but the remark *this rattling no doubt was to give the alarm;* to this I cannot subscribe. Lobsters are gregarious, and have their favourite rocks, and that instinct of self-preservation, which is born with animals, is quite sufficient to drive the young Lobster under the rock at the approach of danger without the care of the parent. The real instinct of animals, even in the lower orders, is sufficiently wonderful without our drawing on fiction. I know from experience that fishermen are not always to be depended upon, and, whether from ignorance or something else, are much given to exaggeration.

My father tells me he once caught a Lobster in a trawl, weighing twelve pounds; and two years since a Lobster was caught in this bay weighing eight pounds.

Weymouth, September 3rd., 1853.

Miscellaneous Notices.

The Hobby, (Falco subbuteo.)—Although mention is made of the arrival of the Hobby as early as March 7th. in "The Naturalist," my experience has led me to come to the conclusion that the Hobby is one of our latest arrivals in this country. In a wood near where I live there has been for four years to my certain knowledge a pair of Hobbies breeding every year. This year I made up my mind to obtain the old birds and eggs as specimens for my cabinet: accordingly I watched close for the arrival. The second week in May I was told of one being seen; on the 31st, I first saw a pair of them flying over the wood I have mentioned; in fact after

that every time I walked there (the wood) I saw them, but could not make out which nest they had fixed upon, (there were many old Rook's nests in the wood, the Rooks having been shot by the keepers;) at last I discovered which they had chosen—secreted myself, and shot the hen bird; fired at the cock, which I failed to obtain although I feared at the time I had wounded him, as several feathers came from him. I got up to the nest, but only found two eggs instead of four,—nothing more could I see of my friend; however on the 19th. of the same month, I saw a female Hobby soaring above the trees; and on the 25th., I saw the pair near the old spot. July 2nd., I saw which nest the hen came off—one near the old one; and being prepared with four coloured Bantam's eggs, I got up to the nest, and there found only two eggs, which I took, and left two of my Bantam's eggs in their place. The following day I left home for ten days. On my return I visited the Hobby's nest, put the old hen off, and a friend of mine shot her in mistake for the cock, which I at last succeeded in procuring; but as it was blowing hard we could not get up to the nest at that time. About four days afterwards we went for the eggs, but found only the shell of one of the Bantams, the others were gone —I imagine taken by the Jays. I know of several other places where they breed in Suffolk. Their food, I feel convinced, consists in a great measure of insects. A practical ornithologist, with whom I am acquainted, has told me that on an evening he has seen the Hobby flying round an oak tree, and catching in his claws the cockchafers, and transferring them to his mouth while on the wing. A gentleman, who keeps many Hawks, gives it as a reason why he prefers the Merlin to the Hobby, that the Merlin does not fly at butterflies as the Hobby does. *I* have myself seen the *Merlin* chase a butterfly. In the crop of one Hobby that I shot was the remains of a young Lark.—J. Farr, Frostenden, Wangford, Suffolk, October 16th., 1853.

Occurrence of the Red-necked Phalarope, (Phalaropus hyperboreus,) *at Benacre*.—On the 24th. of September I shot a nice specimen of the Red-necked Phalarope at Benacre; and the day before a friend of mine shot two. I generally see several every year: it is very pretty to see how buoyant they are upon the water.—Idem.

Is our correspondent quite sure these were specimens of the *Red-necked Phalarope?* which is very much rarer than the Gray Phalarope.—B. R. M.

A hint to Naturalists.—It is with the deepest regret that, as each month's number of "The Naturalist" comes to me, I find in its contents little else but accounts of wholesale massacres of those sweet songsters, whose presence enhances so greatly the pleasure one must ever feel in a country walk. A constant war seems to be waged against the feathered members of creation, on the plea of furthering the ends of Science. Should any rare bird make its appearance on our shores, it is very soon captured by some greedy collector of "specimens," one who styles himself a "Naturalist:" but does the being a Naturalist consist in filling one's study or museum with stuffed birds—with butterflies pinned in a case—with empty egg-shells and nests? Are they not all rather monuments of cruelty? Does the killing of its subjects further the ends of Natural History? Forsooth, if the slaughter increases as it does now, bye and bye there will be no Natural History at all, or at least but a few scattered remnants of its countless tribes, mourning in solitude their lost companions. Are there then no other means of acquiring a knowledge of Nature's subjects than those I so strongly reprobate? How did some of our most learned Naturalists, those who have taught us the most, obtain their knowledge? Was it by means of the gun? Ah, No! but by observation, by diligent searching into the ways of these happy denizens of the woods. Surely books enough have been written, and are daily increasing, to supply every want of a Naturalist; or should we disdain to make use of them for our guides, can we not see for ourselves? Among so many learned correspondents as there are to this publication, some plan might be contrived whereby we could understand and know as far as is permitted these wondrous members of creation, not one of which falls to the ground unless God wills it; and which would dispense with the cruel persecution now almost universally resorted to. Should this succeed in softening the hearts of any of those whose names so frequently figure at the head of Ornithological and Entomological captures, it will be an abundant repayment—its pages will be filled with far more interest and instruction, and read, I am certain, with far greater pleasure.—Thos. G. B. Atkinson, 1, Montpellier Terrace, Cork, October 20th., 1853.

Pectoral Sandpiper, (Tringa pectoralis) *near Redcar*.—Two specimens of this extremely rare bird have occurred near here lately, one was obtained in or near the Tees mouth last August,

and fell into the hands of the landlord of the Masons' Arms in this place, who stuffed it and hung it up in his parlour as an ornament. The other was shot on Monday, the 17th. instant, in a grass field near the Lobster Inn at Coatham, near this place, and was brought to me on the 21st., for inspection. The first I have succeeded, after some trouble, in procuring, for the owner was fully aware that it was a *rara avis*.—T. S. Rudd, Redcar, October 25th., 1853.

The Merlin, (Falco Æsalon,) *near Banff*.—I shot a beautiful male specimen of the Merlin on the 15th. of August, on the farm of the Mill of Boyndie, near Banff. It is a rare bird so far north.—George Donaldson, Mill of Boyndie, near Banff, September, 1853.

Review.

The Eggs of British Birds, displayed in a series of Engravings, copied and coloured from Nature, with descriptions of British Birds. By C. Jennings. The Illustrations by Dickes. p. p. 266. Second Edition. Bath: Binns and Goodwin. London: Low and Sons, Etc.

The above title would lead any one to expect some little information on the subject of the Eggs of all our British Birds as displayed by Engravings, and also descriptions of the Birds themselves. We much regret that we are under the necessity of saying that the Engravings, instead of giving correct information, originate error of the most unpardonable nature. Thus, for instance, we have an Engraving of an Egg under which *Thrush* is printed, which in size, colour, and markings evidently is intended for that of the Magpie; while under another, clearly intended for that of the Thrush, is the word *Magpie*. Another labelled *Woodpecker* is of a yellowish gray ground, spotted with dark greenish gray. Another labelled *Small Woodpecker* is white, with numerous red spots over it.* No explanation is given in the text, nor is any special mention made of the colour of these eggs; indeed in very few instances is the colour of any egg named. The Engravings are bad, the colouring worse, and the unacknowledged errors show an amount of ignorance which we did not expect to find in the present enlightened age.

Instead too of finding figures or descriptions of the Eggs of *all* our Birds, only between *forty* and *fifty* are figured and named; leaving upwards of *two hundred and fifty* to the imagination of the reader. It is a pity the remaining portion was not also left in the same way.

The *letter-press* is pleasingly written as far as it goes, and had the coloured Engravings exhibited any approximation to nature, we could have made every allowance for the small number of Eggs or Birds included in the volume. We cannot however but think that the title would, even in that case, have been calculated to mislead, as giving the expectation of finding information respecting *all* our Birds. It is not in our power, nor indeed is it our place, to point out how the gross errors we have named occurred, or were allowed to go before the public without explanation and apology.

* It is well known that all our Woodpeckers lay *white* eggs. The egg given as the *Crane* is that of the Common Heron, and is not above one-third the size of the Crane's egg; which is also of an entirely different colour.

The Retrospect.

The following remarks on the paper of O. S. Round Esq., in the last number of "The Naturalist," on the Wagtails, are offered, should no one more competent than I am, deem it necessary to comment on it:—That Mr. R. has misapplied the name *Motacilla Alba* to the Pied Wagtail *M. Yarrellii* of modern authors is quite evident, altogether overlooking the fact that that name has been more appropriately given to the now White Wagtail; a description and coloured figure of which he will find by the Rev. F. O. Morris, in his excellent History of British Birds, as well as by other ornithologists. I agree with him that we have not a bird of more elegant form or graceful action, but I cannot agree with him when he says, that the hen is to be distinguished from the cock by having a white chin, for I have examined a great number of specimens, both male and female, and I am convinced the only difference in the summer plumage consists in the male having blacker markings, whilst in the winter (if Mr. R. is correct) all the old birds become females, as in the winter plumage they have all white chins, the young birds retaining their sombre grey plumage until the spring after their birth. Mr. R. also denies that the Pied Wagtail is endowed with anything more than a "high chirrup, and beyond this he has no song;" if he should ever visit this part of the world in the spring of the year, I am certain he will be gratified by having opportunities of hearing a sweetly warbled song (with which I have been frequently delighted) from many a Cornish Wagtail, who, I believe, are not more highly gifted than others of their English brethren. In other respects the description correctly applies to the Pied Wagtail. Mr. R. further says there are two other kinds of Wagtails known in England, the *M. Boarula*, and the *M. Flava;* whilst Mr. Morris enumerates five distinct kinds, (of the correctness of which there can be no doubt,) giving coloured figures of each,—*M. Yarrellii*, *M. Alba*, *M. Flava*, *M. Sulphurea*, and *M. Neglecta;* yet Mr. R., because he had "never seen a nest of the *now M. Sulphurea*, or the bird itself in any number," doubts its identity, supposing it to be a "mixed kind," until he had "opportunities of meeting with the like parties of the Gray Wagtails, old birds and their broods, as in the case of the common Water Wagtail."* This is I think being rather over cautious, for surely we ought to put some faith in the statements of the many excellent ornithologists, who have had opportunities of seeing the various kinds of Wagtails, and so accurately describing them. It is true I have never seen a specimen of the *M. Alba* or the *M. Neglecta*, although the former is not uncommon, the latter is much more rare, both east and west of us, on the coasts of Devon and Cornwall; and I have been constantly on the look out for them for many years past, yet I have sufficient faith to believe such men as Messrs. Rodd and Gatcombe, when they tell us they frequently procure them. Still I am one of those who doubt the propriety of adding a new bird to the British Fauna from a specimen or two being found straying to these parts. Throughout this paper I have used the specific names, as given in the Rev. F. O. Morris's work, now publishing, which I have no doubt must become a standard work, and will lead to a more regular system of nomenclature in ornithology, for the want of which Mr. Round appears partly to have erred.—Stephen Clogg, East Looe, October 12th., 1853.

Proceedings of Societies.

Scarborough Philosophical and Archæological Society. Meeting, Monday, June 27th., 1853.—Dr. Murray, one of the Vice-Presidents, in the chair.

The Chairman read the following paper "On a specimen of *Squalus Spinosus*, lately captured a few miles off Scarborough, with some observations on the *Squalus Angelus*":—"A Shark remarkable as a rare visitor of the British shores, the *Squalus Spinosus, or Spinous Shark*, and of very uncommon magnitude, was captured by some of our fishermen, last week, in our bay, and as before mentioned, was of unusual size, being upwards of eleven feet in length, by eight feet five inches in girth, and three feet nine inches in depth, and in weight about one thousand two hundred pounds. The extraordinary bulk of the fish in proportion to the length, is very striking and characteristic of this species; and another distinction is offered by the skin being sprinkled over with strong bent sharp bony spines, arising from broad circular bases, imperfectly radiated and semi-transparent. The colour of the skin leaden grey, somewhat paler

* I have never met with them in such parties, unless immediately after the breeding season, before the young are capable of caring for themselves, after which they are only to be found singly or in pairs.

on the sides and belly. The head nearly truncated beneath the upper jaw, and the mouth exceedingly wide, and furnished also with a triangular fold of skin arising from each jaw, and thus affording the capability of a yet wider extension of the gape. Teeth nearly triangular, and in one row in the lower jaw: in a triple range in the upper, and of a more quadrangular form. Nostrils small and each divided by a narrow cartilaginous septum. Eyes very small with green irides. The first dorsal fin nearer to the caudal extremity than in other Sharks, but less so than in several of the figures and descriptions of this particular species. The liver weighed twelve stones, and would yield a large quantity of oil. In the stomach a large cod's head and ling were found.

Yarrell in the Supplement to his valuable History of British Fishes, when noticing this addition to our Ichthyology, enumerates four examples having occurred on our coasts before the publication of that Supplement, of which two were found in the Yorkshire seas; but all very inferior in size to that now taken.

The *Squalus Spinosus* was first described by Brongsonet in the Memoires de l' Academie, in 1780: and is a fish of very wide geographical range."

"Another species of Shark, remarkable in form, and very interesting as connecting the genera of Shark and Ray, has also been taken in our bay within the last few months, the *Squalus Angelus* or *Angel Fish*, which has been constituted by Dr. Fleming and others into the separate genus of *Squatina*, and like its namesake, favouring our seas with visits few and far between. The body is long and depressed, with the characteristic mouth and teeth of the Shark; and from the singular expansion of the pectoral fins, has obtained the name of Angel, in consequence of a fancied resemblance to wings. Length, five feet; weight, one hundred pounds; colour, dull ash, with a tinge of brown on the back, the under parts of a dirty white. The flesh dark coloured and said to be exceedingly coarse and rank, insomuch that even the Lazzaroni of Naples, who can eat almost everything, even many of the molluscous animals, refuse this."

Mr. Leekenby then exhibited a series of fossil plants, recently obtained from the supposed exhausted beds at Gristhorpe; amongst them were examples of *Pterophyllum tenuicaulis*, Phillips. *Pterophyllum angustifolium*, Bean's M. S. *Tæniopteris major* and *vittata*, Lindley. *Cyclopteris digitata*, *Glossopteris Phillipsii*, Brongniart; several specimens of the genus *Pecopteris*, a probably undescribed *Sphenopteris*, and a series of specimens shewing the gradations from *Tympanophora* of Lindley, to *Sphenopteris*, one specimen exhibiting the two conditions of the barren and fertile leaflets on the same frond, a circumstance which he had detected, in conjunction with his friend Mr. Bean, some years ago.

A claw of the common Crab was exhibited, presenting a singular malformation in an abortive jointless pair of fingers inserted and projecting from the ordinary upper moveable finger, which was distorted and curved under the lower normal one.

Some further conversation took place between Mr. Cooke and the chairman, on the subject of a letter which Mr. Cooke had received from a scientific friend at Berwick, applying for information and particulars as to the local Flora and Fauna, recent and fossil, which many of the members expressed their readiness to furnish.

Several contributions were promised for the next meeting—after which,

On the motion of J. J. P. Moody, Esq., seconded by Mr. Page, the thanks of the meeting were presented to Dr. Murray, for his valuable paper on the *Squalus Spinosus*.

Obituary.

It is with sincere regret that we record the death of Hugh E. Strickland, M. A., F. G. S., etc. It took place under peculiarly painful circumstances while on his return home from the meeting of the British Association at Hull, on the 14th. of September last. He was anxious to examine the cutting at Clarborough, near Gainsborough, with a view to elucidate some points of geological interest, and to do this he walked from the station to the cutting. While investigating the exposed strata, he saw a train coming in one direction, and stepped on to the other line of rails, not having observed another train, which was coming in the contrary direction. He was struck by the unseen train, and his death must have been instantaneous. His loss will be long felt, not only by his own immediate family, but by the whole of the scientific world. We quote the following just tribute to his memory from the "Athenæum."

We will not venture to curtail it in any of its interesting particulars:—

"Mr. Strickland was in the prime of life—at that age when the promise of youth is fast realizing itself. He was born at Righton, in the East Riding of Yorkshire, on the 2nd. of March, 1811. His father, Mr. Henry E. Strickland, of Apperley, in Gloucestershire, was a son of the late Sir George Strickland, Bart, of Boynton, in Yorkshire. He was a grandson on his mother's side of the celebrated Dr. Edmund Cartwright, whose name is so indissolubly connected with the manufacturing greatness of England on account of his invention of the Power-loom.

Mr. Strickland's boyhood was spent under his father's roof; where he was under the private tutelage successively of the three brothers Monkhouse, one of whom is now a Fellow of Queen's College, Oxford, From his father's house he was transferred to the late Dr. Arnold, who, prior to his appointment at Rugby, took private pupils at Laleham, near Staines. He finished his education at Oriel College, Oxford.

Although distinguished for his classical knowledge, Mr. Strickland had early acquired a taste for natural history pursuits; and after the completion of his studies at College he resided with his family at Cracourt House, near Evesham, Worcestershire. where he studied minutely the geology of the Cotswolds and the Great Valley of the Severn. Some of his earliest published papers were on Geology; but his first effort as an author indicated a taste for the pursuits of his maternal grandfather. It appeared in the "Mechanics' Magazine" for 1825, and was on the construction of a new wind gauge.

In 1835, Mr. Strickland travelled in Asia Minor, in company with Mr. W. J. Hamilton, M. P., who was then Secretary to the Geological Society. An account of this journey was published, in two volumes octavo, by Mr. Hamilton, in 1842, under the title "Researches in Asia Minor, Pontus, and Armenia." This tour resulted also in the publication of several interesting papers on the geology of the districts visited, both by Mr. Strickland himself, and conjointly with Mr. Hamilton. The principal papers published by Mr. Strickland singly, were—"On the Geology of the Thracian Bosphorus," "On the Geology of the Neighbourhood of Smyrna," and "On the Geology of the Island of Zante." He early devoted his attention to the study of birds; and during this journey he gave proof of his ornithological knowledge by adding to the list of birds inhabiting Europe the *Salicaria Olivetorum*. He subsequently devoted a large share of his attention to the study of birds; as his papers in the "Annals and Magazine of Natural History," and in Sir William Jardine's "Contributions to Ornithology" amply testify. His principal work, however, on this subject, and the one which will give him a place amongst the classical writers on the ornithology of this country, is devoted to the history of the Dodo. This work was published in 1848, with the title "The Dodo and its Kindred; or, the History and Affinities of the Dodo, Solitaire, and other Extinct Birds." It was handsomely illustrated; and was an example of how the difficult subject of the affinities of extinct animals should be dealt with. Mr. Strickland was aided in the osteological portion by Dr. Melville. Since the appearance of this work, he has twice published supplementary notices regarding the Dodo and its kindred, in the "Annals and Magazine of Natural History." One of Mr. Strickland's last contributions to science was on the subject of ornithology, when, in the Section of Natural History, the day before his death, he gave an account of the Partridge (*Tetraogallus*) of the great Water-Shed of India, recently illustrated in Mr. Gould's "Birds of Asia."

Although, as a zoologist, ornithology was his strong point, Mr. Strickland had an extensive knowledge of the various classes of organized beings. Thus, several of his papers were devoted to accounts of the Mollusca, both recent and fossil, in various districts. One of his papers at the last meeting of the British Association at Hull was "On the Peculiarities of a Form of Sponge, (*Halichondria sabercа.*")

Mr. Strickland paid a large share of attention to the terminology of Natural History, and was the reporter of a committee appointed by the British Association to consider of the rules by which the nomenclature of zoology might be established on a uniform and permanent basis. These rules were principally drawn up by him; and they have since their publication been very generally acted on, and have contributed greatly to simplify Natural History nomenclature. The general principles of classification could hardly fail to interest a mind so discursive as his, and accordingly, we find him at various times publishing on this subject. In an early number of the "Annals and Magazine of Natural History" he inserted a paper "On the true Method of discovering the Natural System in Zoology and Botany," in which he displayed

a great knowledge of the forms of animal and vegetable life. In the Reports of the British Association for 1843, he published a paper "On the Natural Affinities of the Insessorial Order of Birds;" and again, in the "Magazine of Natural History," vol. ii., "Observations on the Affinities and Analogies of Organized Beings."

It must be obvious, that the labours to which we have alluded, imply an immense amount of industry; but in the midst of all his practical investigations, Mr. Strickland found time for purely literary work. Thus, in 1847, he undertook to edit for the Ray Society a work, the collection of materials for which had cost Professor Agassiz many years of labour, entitled "Bibliographia Zoologiæ et Geologiæ." Three volumes of this great work are published, and the fourth and last is now in the hands of the printer. Mr. Strickland's labour here was not merely that of editing—it embraced the contribution of a large mass of additional matter, amounting to a third or fourth of the whole. He spared no pains to make this work complete; and it must ever be regarded by the zoologist and the geologist, as a most valuable gift to the sciences which they cultivate.

On the occurrence of the illness of Dr. Buckland, and his withdrawal from the duties of the chair of Geology at Oxford, every one felt the propriety of inviting Mr. Strickland to deliver lectures in his place. Though young for so important a post, and with a reputation in other departments of science, he was found able to sustain the fame of his predecessor in this, and brought to bear with great advantage the stores of his varied knowledge upon a science which is always susceptible of influence and amplification from the principles of other departments of science, however distant from it they may at first sight appear. The Reports of the British Association, the Transactions of the Geological Society, the papers of the Quarterly Journal of the Geological Society of London, and of the London and Edinburgh Philosophical Magazine, all testify to Mr. Strickland's activity as a geologist. They contain a mass of valuable observations both on palæontology and on the physical structures of rock in this country and in other parts of the world, which must for ever remain a part of the history of the science of geology, and constitute a permanent monument of the industry and earnestness of the man who made them.

In several of his geological papers, Mr. Strickland's name is connected with that of Sir R. I. Murchison; especially in a work on "The Geology of Cheltenham and its Neighbourhood." He assisted Sir Roderick in preparing for the press his great work on the Silurian system; and the proof sheets of his new work on Siluria all passed through Mr. Strickland's hands—the last of the work having been corrected at Hull.

At the time of his death, Mr. Strickland was engaged in working on his "Ornithological Synonymy," the printing of which was delayed only to render it more full and complete. He possessed a very ample and useful library, also extensive geological and ornithological collections, which are now at his residence at Apperley Green, near Tewkesbury.

In 1845, Mr. Strickland was married to the second daughter of Sir William Jardine, Bart.: both of whom, with Mr. Strickland's father and mother, survive to lament his premature loss.

In the above brief sketch we have spoken only of Mr. Strickland's scientific career—but he had moral qualities that endeared him to all who knew him. Few came in contact with him who did not recognize in him a conscientious, amiable, and excellent man. In him Oxford has lost a Professor whom she could ill afford to part with at this time. To him, they who hoped for the wider culture of natural science at Oxford looked as to one who had the power and ability to take a lead. The scientific Societies have lost in him a member who was unwearied in his assiduity to carry out their objects in all their purity. His means made him independent of his labours; and all recognized in his exertions that love of science and its objects which constitutes the true philosopher."

The Querist.

Will Mr. Mc'Intosh be so kind as to inform us whether all the trees he enumerates are easily, and where, procurable, and whether any of them are very expensive?—F. O. Morris, Nafferton Vicarage, Driffield, October 27th., 1853.

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WITH NUMEROUS ENGRAVINGS.

CONDUCTED BY

BEVERLEY R. MORRIS, ESQ., A.B., M.D., T.C.D.,

MEMB: WERN: CLUB.

LONDON:

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Communications have been received, up to December 15th., from H. S.;—J. P. Fraser, Esq.;—H. C. Stuart, Esq.;—Mr. T. Lister;—Mr. I. Williamson;—S. Stone, Esq.;—J. Harrison, Esq.

Contributions have been received, up to December 15th., from the Rev. W W. Cooper;—J. Gatcombe, Esq.;—J. Rose, Esq.. M.D.;—Henry Corbett, Esq.;—J. Garland, Esq.;—Mr. M. Westcott;—W. Sawers, Esq;—Mr. E. Parfitt;—Mr. T. Edward.

A letter from W. Felkin, Esq., received some time back, was replied to by post, but we have had no answer; we fear it has miscarried. Will Mr. F. favour us with a reply; we fear we did not read the name of the post town correctly.

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M. D., Driffield;—Books for Review and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row.

THE

NATURALIST;

A POPULAR MONTHLY MAGAZINE,

ILLUSTRATIVE OF THE

ANIMAL, VEGETABLE, AND MINERAL KINGDOMS.

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BEVERLEY R. MORRIS, ESQ., A.B., M.D., T.C.D.,

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VOL. IV.

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M. DCCC. LIV.

BRITISH MUSEUM
NATURAL HISTORY

THE NATURALIST.

BRITISH MUSEUM NATURAL HISTORY

THE CONEY, (*HYRAX SYRIACUS*)

BY JOHN LONGMUIR, ESQ., JUN.

One of the most singular quadrupeds, in a scientific point of view, with which we are acquainted, is the Coney of Scripture, *alias* the Daman, and the *Hyrax Syriacus* of naturalists. In its general appearance, colour, and size, it so closely resembles a Rabbit, that several of our older naturalists placed it in the order *Glires*, (*Rodentia*, Cuv.,) along with these animals. Pallas, who was perhaps the first naturalist that anatomically examined any of the species of the genus *Hyrax*, saw some individuals alive at Amsterdam, but obtained his description from a specimen, preserved in spirits, of a very closely allied species, the Cape Hyrax, (*H. Capensis;*) but the value of the specimen obtained by Pallas was very greatly diminished by its not possessing two parts, which, although always important, were especially so in this case, namely, the head and feet.

The illustrious Baron Cuvier was the first to assign to it its proper place, and, according to him, no quadruped could exhibit, in a more decisive manner, the utility and importance of comparative anatomy; for, by a careful examination of its skeleton, he has shown that it is in reality a miniature Rhinoceros, as, although altogether unlike that ungainly animal in general appearance, it agrees with it to a remarkable extent in the internal structure, in the skeleton, and in the dentition. The Prince C. L. Bonaparte, in his arrangement of the class Mammalia, places it in a family immediately after that of the *Rhinocerotidæ*, which he calls *Hyracidæ*. In this family there are five or six species, the principal of which are the Hyrax, or Klip-das, pre-eminently so called, (*H. Capensis*;) and the *H. arboreus* of Western Africa, which has obtained its name from its habit of climbing trees. Mr. Swainson, in his "Classification of Quadrupeds," considers it to be the Gliriform type, (or representative of the order to which the Rabbits, etc., belong,) of the *Pachydermata*, on the sole authority of what M. Cuvier states regarding the construction of its feet.

The wide space which intervenes, in our modern fauna, between the Rhinoceros and the Hyrax, is filled up by fossil species, such as the *Anthracotherium*, *Merycopotamus*, and *Chœropotamus*, which last, according to Professor Owen, "was the earliest form of the Hog tribe introduced upon our planet." It seems to have resembled the Peccary, (*Dicotyles torquatus*,) in form, but was about one-third larger. Its remains, which have been discovered

near Ryde, Isle of Wight, show that it was once an inhabitant of this country. Another link is supplied by the Leporine Hyracotherium, (*Hyracotherium leporinum,*) whose remains occur in the London clay, at a short distance from Herne Bay, and which, in the conformation of its skull and general form, seems to have resembled the subject of the present sketch.

Commentators on the Bible, and those who have employed themselves in the more particular elucidation of the Natural History of the sacred volume, have experienced considerable difficulty in the determination of the particular animal meant by the word *Shaphan*, which our translators have rendered "Coney;" the Rabbit, the Jerboa, and the Mouse being supposed by different writers to be intended; the difficulty arising principally from the incorrect or superficial statements of travellers.

As before stated, the Coney has a very strong resemblance to the Rabbit, hence the name of "Rock Rabbit," which is frequently applied to it. The eye is remarkably small, and the ear is short and somewhat pointed, thus distinguishing it from a variety which inhabits Abyssinia, and which, according to Bruce, has a *rounded* ear; there are, during nonage, two very small canines; the upper incisors, which are two in number, are bent, pointed, and stout, and placed at a short distance from each other; the lower incisors are four in number, closely arrayed, flat, and directed forwards; the molars are seven on each side, above and below, the first, however, generally falls out, and in old individuals the next is also frequently wanting; the jaw-bone is not articulated so as to admit freely of ruminating. The general colour of its fur, which is thick and soft, is dark brown, and along its back there are traces of a light and dark shade; it has a few bristles about its mouth, over its head, and along its back, and other parts of the body, and from the resemblance which these bristles bear to small thorns, the inhabitants of Amhara call the animal *Ashkoko, Ashok* in their language signifying a thorn. Its hind foot has three toes, which are buried in the skin as far as the small and rounded horny hoofs, precisely in the same manner as those of the Rhinoceros; in the fore foot the toes are four, the fourth being contracted, but possessing, in compensation, a rather long, bent, oblique nail. The expression "feeble folk," applied by Solomon to these interesting little animals, besides referring to their general weakness, is thought by some to convey a more especial allusion to the feet, the under surface of which is very soft and tender, altogether unfitting it for burrowing or catching prey, its only mode of attack being by means of its teeth, with which it sometimes inflicts rather severe wounds; its tail is a mere tubercle.

It tenants the acclivities of rocks, where its nest is generally a hole comfortably lined with moss and feathers, agreeing with the statement in the book of Proverbs that the Conies make their houses in the rocks. It is gregarious, and whole families may be seen at one time, gambolling and skipping about among the rocks, or sitting, enjoying the warmth of the sun, upon the large blocks of stone near their places of retreat, to which they run with

great celerity at the least appearance of danger, shrinking even from the shadow of a passing bird. In the book of Leviticus the Coney is mentioned as chewing the cud, but it would seem that this expression refers to the peculiar motion of its jaws when eating, which appears to resemble the action of ruminating so much, that Bruce, the traveller, who kept one in order to watch its habits, says, "it certainly chews the cud." Its food consists principally of grain, vegetables, and roots. It is considered an acceptable prize by the Eagles and other birds of prey that frequent the localities in which it is found, for the purpose of feasting on any stray one which they may observe wandering beyond safe limits.

The Rev. Dr. Wilson, of Bombay, who describes and gives a representation of a specimen which he obtained near the convent of Mar Saba, between Jerusalem and the Dead Sea, seems to have been the first English traveller that actually recognised the Coney within the bounds of the Holy Land, so that it still continues to inhabit Palestine and Syria, and Mount Lebanon in particular, in great numbers, although in the "Biblical Cyclopædia," edited by Dr. Kitto, it is stated that in the countries just mentioned, not a trace of it has been found.

The various species of the genus *Hyrax* seem to bear confinement well; they are mentioned among the animals in the collection of the Zoological Society of London.

Aberdeen, September, 1853.

NOTES ON THE CERE AND LEGS OF BIRDS.

BY JOHN LONGMUIR, ESQ., JUN.

A considerable time ago, when the attention of the writer was first directed to the Raptorial order, an almost constant similarity appeared to him to prevail in the colours of the cere and legs of the birds of that division. As *no* statement confirmatory of this was found in a few accessible ornithological works, it was held to be a mere supposition, true perhaps in a few instances, but not entitled to the position of a general rule. An article in "The Naturalist," (vol. ii., page 96,) by the Rev. George Sowden, directed attention to the subject once more, and another examination was determined on. With this view, the works of Gould on the Birds of Europe and Australia, the descriptions of the species inhabiting Western Africa, by Swainson, and the volumes containing the biography of the Raptorial tribes of the United States, by the celebrated Audubon, were consulted.

For the sake of some who may peruse the following remarks, a few words may be said about the cere, which is so called from its resemblance to wax, (*cera.*) It is a belt of naked soft skin, generally smooth, though sometimes rough, as in the Sea Eagle, covering the base of the bill. It is of various forms—*long*, as in most of the Vultures, and *short*, as in the group of the Falcons. In all birds of prey the nostrils are situated near the middle of

this appendage, and some writers consider it to be connected with the sense of smell. It is not confined to this order, for the Parrots, which are exclusively vegetable feeders, have a cere, although indeed on a much smaller scale. "No other land birds," says Swainson, "possess this appendage; nor can it be said to exist, under the same form, in any other birds, excepting some of the Rasorial orders: most of the Cranes, Herons, etc. have the space between the eye and the bill naked and soft; but this is merely from the ordinary skin being destitute of feathers." Ornithological writers seem to have paid comparatively little attention to the cere, as it frequently happens that, in the description of species, any mention of this part is altogether wanting. Its colour often furnishes cause for a diversity of statements, which may arise from a want of minute accuracy, or from its having been noted some time after the death of the bird, during which a considerable change may have taken place. The colours in young birds are often considerably different from their appearance when in adult plumage, so that they cannot be referred to for any confirmation or denial of the rule which we are attempting to prove.

In the following remarks it has been found convenient to follow the arrangement proposed by Mr. Swainson, in his "Classification of Birds" in Lardner's Cyclopædia:—

FAMILY I.—VULTURIDÆ.

The Griffon Vulture, (*Vultur fulvus,*) a specimen of which strayed into Cork harbour in the spring of 1843, has bluish black cere and legs; these parts in the Turkey Vulture, (*Cathartes aura,*) nearly approach a blood red tint; in the Californian Vulture, (*C. Californianus,*) the cere is yellowish red and the legs yellowish grey, the same colour predominating in both; in the adult Egyptian Vulture, (*Neophron percnopterus,*) both these parts are yellow.

FAMILY II.—FALCONIDÆ.

Sub-family I.—*Aquilinæ,* (the Eagles.)—The cere and legs of the Osprey, (*Pandion haliaëtos,*) are blue; of the White-headed Osprey of Australia, (*P. leucocephalus,*) bluish lead-colour; in the Wedge-tailed Eagle of Australia, (*Aquila fucosa,*) the Imperial Eagle, (*A. imperialis,*) the Spotted Eagle, (*A. nævia,*) the Golden Eagle, (*A. chrysaëtos,*) with many others, both cere and legs are yellow; these parts are whitish yellow in the Little Australian Eagle, (*A. morphnoides,*) and also in the White-headed Eagle, (*A. leucocephala,*) which is the one chosen as the emblem of the American Republic, a choice with which Benjamin Franklin and J. J. Audubon are by no means satisfied; in the Short-toed Eagle of Europe, (*Circaëtos brachydactylus,*) both are of a bluish colour.

Sub-family II.—*Cymindinæ,* (the Kites.)—In this division we meet with what appears to be an exception in the case of the Brazilian Caracara, (*Polyborus Braziliensis,*) which, according to Audubon, has the cere *carmine* and the feet *yellow;* but as he himself mentions that the colours in the specimen which he examined began to fade immediately after it was shot, may not

these parts have changed considerably? it is possible; but even had they not done so, this is but one exception. In another species of this group, the *Cymindis hamatus*, a native of Brazil, both cere and legs are yellow; in the Swallow-tailed Kite, (*Nauclerus furcatus*,) which possesses great beauty of form and singularly graceful and protracted flight, the cere is light blue, and the legs are of the same colour slightly tinged with green; in the Black-winged Kite, (*Elanus melanopterus*,) and Letter-winged Kite, (*E. scriptus*,) both Australian species, these parts are yellow.

In Sub-family III.—*Buteoninæ*, (the Buzzards,) the Common and Black Kites, (*Milvus regalis* and *M. ater*,) have yellow cere and legs; in the case of the Honey Buzzard, (*Pernis apivorus*,) there seems to be a diversity among writers on this subject; the authority of the Rev. F. O. Morris is quoted for the cere being *blue*, Yarrell states that it is *grey*, and Sir W. Jardine, in describing a fresh-killed specimen, gives the colour of its cere as *lemon yellow;* the legs, according to all these writers, are *yellow;* so that, adopting the colours given by the last-mentioned ornithologist, even this proves to be no exception: it may be remarked that a *yellow* cere becomes in a very short time of a *greyish* colour. In the Crested Spizætus, (*Spizætus cristatellus*,) a species which is said to be extremely rare, the cere and legs are of a yellow colour, the former being considerably tinged with green. Proceeding to the Buzzards of this country, we find in them, as well as in the Black-breasted Buzzard of Australia, (*Buteo melanosternon*,) a yellow cere, and legs of the same colour, which is also the case in the European and Australian species of Harrier, (*Circus*.)

Sub-family IV.—*Falconinæ*, (the Falcons.)—In all the examples of the genus *Falco* from Australia, Western Africa, America, and, with one exception, from Europe also, the parts under consideration more or less nearly approach a bright yellow colour; the exception being in the case of the Orange-legged Falcon, (*F. rufipes*,) which has reddish orange legs and cere. In a West African species of the genus *Aviceda* of Swainson they are bright yellow.

Sub-family V.—*Accipitrinæ*, (the Hawks.)—In this division of the *Falconidæ* are the Sparrow-Hawks, the British, Australian, and American species of which have yellow cere and legs; the same is true of the Goshawks of these countries.

Having thus glanced at most of the genera in the Raptorial order, it seems evident that the similarity which has been traced between the colours of the cere and legs of these birds is not accidental; for although in one or two stray instances, such as the White-bellied Sea Eagle of Australia, in which the cere is of a *bluish lead-colour*, and the legs are *yellowish white*, there is a considerable difference, this occurs in comparatively few cases, and it may be inferred that the colour of both cere and legs, as a general rule, is the same. More might have been said on this interesting subject, but it is to be hoped that others will be led to complete these investigations, of which what has now been stated is but the commencement.

Aberdeen, July 13th., 1853.

NOTES ON THE DAYS WHEN THE SUMMER BIRDS WERE FIRST OBSERVED ABOUT BARNSLEY, WITH INCIDENTAL NOTICES OF OUR RARER BIRDS AND THEIR SYSTEMATIC EXTERMINATION.

BY MR. T. LISTER.

(Continued from page 244, Vol. III.)

April 18th.—Walked with my usual companion to Cliff Wood, which we had scarcely left unsought one day this spring; here he was summoned back at the relentless call of duty, and unfortunately in this instance, as in that of the Chiff Chaff, to miss the first notes of another member of that interesting family. A few moments after he had gone, I was greeted by the more musical strain of the Willow Wren, one week later than last year, and soon after by the more loud and dashing notes of the Tree Pipit. These strains, the first of the present year, added a new and lively interest to the chorus of Sky Larks, Buntings, Thrushes, and Finches resounding on every side. The strain of the Meadow Pipit, our winter resident, which I had first noticed on the 3rd. of this month, was heard in fine contrast, from the near fields, to its kindred bird of the woods and trees. It sings both in its ascending and descending flight, a habit which distinguishes it from the Tree Pipit, whose song begins at the top of its flight, continuing through the descent until near the ground or tree where it alights. I have never seen any variation from these habits in either bird, *when the song is uttered in flight,* (for both will sing from a tree, or post, or the ground,) and I am surprised not to find by any naturalist the distinction pointed out, the song during *descent only* being ascribed to both birds, or the distinction is passed over in silence, by men whom I have followed with unquestionable deference, and have not hitherto published the discrepancy, to avoid the appearance of a petty carping spirit. Both are about here indiscriminately called Titlark, but a well defined account of their song would have made the two species distinct to the learner; as with the three summer Wrens, (*Sylvia,*) where the outward similarity is so great, except in minute points of claws and quills, the song would be the easiest mode of knowing them one from another. It is difficult to mark at a distance the long straight hind claw of the Meadow Pipit so as to distinguish it from the shorter arched one of the Tree Pipit.

April 19th.—Saw the Yellow or Spring Wagtail the first time this season in the corn lands adjoining Mottram Wood, attracted by its sprightly call-note and jerking undulating flight.

April 21st.—Heard the first Redstart of the season in Mottram Wood, during my morning walk to the Dearne Valley.

April 22nd.—Walked with my companion to Cliff Wood. While entertaining ourselves with the unbought minstrelsy of our home songsters, as the Storm-cock, Spink, Jenny Wren, and our newly-come visitants, as the Willow Wren, Tree Pipit, and Chiff Chaff, now abounding in every copse and wood, and having our ears awake to detect the earliest sounds of any new arrivals, we

heard a few low strains, ascending to a cheerful buoyant carol, which had in some notes a resemblance to the Blackbird and Thrush; indeed my friend went away with the impression that it was the latter of these fine songsters. Not being satisfied myself, as we stood at some distance, I penetrated deeper into the wood, and soon recognised as the voice of an old friend the rich lilting note, increasing in elevation to the close, of our favourite the Blackcap Warbler, which, with the Garden Warbler, are the only first-class songsters of this family to supply the loss of the imprisoned Nightingale.

April 24th.—Heard first the few grating notes of the Whinchat's song in the fields below the town.

April 25th.—Varied my walk, and went up Pogmoor fields, and was rewarded by seeing for the first time this season the Wheatear flitting over the fallows, and attracting my attention by the vividness of tint on its upper tail coverts, seeming at first like a floating white feather.

April 29th.—Walked on the canal bank this evening, and observed sporting over the Dearne meadows the first Martins that have come under my notice this year.

April 30th.—Walked down Old Mill Lane and along the canal side; a young relative overtook me at the Aqueduct, and shared in my high privilege of hearing for the first time this year four of our warbling visitants in Cliff Wood. First was heard the 'cha, cha, wheet, wheet, why' of the Whitethroat, followed by its merry interruptedly gurgling song; next the plaintive call, unlike that of any other bird, the 'pheu, pheu' of the long-winged Wood Wren, succeeded by its equally singular song, 'tzit, tzit, tzit, tz-z-z-e,' which, from its hissing character, has gained for it its specific designation of *Sibilatrix*, and one of its local English names of the Wood Shaker; next we heard the 'tir-r-r-x-x' of the Grasshopper Warbler; and lastly the polyglot strain, half chatter, half warble, of that comedian of birds the Sedge Warbler. These birds were all unknown, previously, to my companion; the latter three interested him greatly on account of the peculiarity of their notes, particularly the Grasshopper Warbler, which, like most other people, he would never have pronounced to be a bird, but an insect of the grasshopper kind. His curiosity to get a sight of it was at length rewarded, and by the aid of my small Dollond, he proved that the singular sound issued from a veritable bird. To crown the whole, and mark this day with a white stone, that pleasant wandering voice, the Cuckoo's two-fold note, was heard in our land, probably for the first time this spring.*

May 6th.—Tidings of two Nightingales observed this day in Ethersley Wood, two miles north of Barnsley; heard, alas! in the same breath as their capture.

* Cuckoos are amongst the various large birds that have been more numerous than usual throughout this summer, even visiting the gardens about the town; in such cases being the mark for every idler's pop-gun, and, like the Thrush, Blackbird, and Nightingale, instead of reaping the reward of gratitude, doomed to death or a prison for their song. I have seen for the first time a Cuckoo's egg, pointed out to me by a boy amongst the blue eggs of the Whinchat: this puzzle to him was soon made out from Morris's plates.

This is as mortifying as to read in the naturalist journals of the occurrence of some rare and beauteous bird, and, in nine cases out of ten, to read in the next line that it was shot or captured, sometimes with the editorial comment as to the party being *fortunate* enough to observe and secure such a prize. How worthier for scientific authorities to encourage the preservation of such diminishing rarities for the gratification of the many in their free natural state, than to foster a spirit of self-appropriativeness, and sometimes a vain craving for notoriety, in the few; this is a question they will have to take up, if they have a true love for the object of their study.

May 7th.—Observed in the Dearne meadows the Sand or Bank Martins in numbers, chasing flies, in company with the House Martin, Swift, and Swallow.

May 9th.—A fall of snow occurred, covering the ground to the depth of from ten inches to two or three feet, deepening westward; the rain-gauge on the post-office roof, twenty-eight feet above the ground, indicated two inches of water.

From May 10th. to 16th.—Took many walks in various directions, observing the fearful effects of the snow-storm and flood on fields, trees, and the feathered tribes. The ground-builders suffered greatly; even the bush and tree-builders did not escape injury to their ingenious dwellings. The ravages of this spring storm I have recorded at length in the public prints. Of the rarer birds noticed in these rambles were the Long-tailed Tits, and their curious bag-like nest ruined and desolate: of this family we have all except the Bearded and Crested Tits. The Large Spotted Woodpecker was repeatedly seen in our vast woods, which contain also the Lesser Spotted, and, more rarely, the Green Woodpecker. The Nuthatch and Tree Creeper were seen abundant in Stainbro' Park, which locality has the uncommon reputation of possessing in summer the Pied Flycatcher. The Siskin I have seen thrice this season; not seen by me previously. Several Bullfinches, and, more rarely, Goldfinches I have seen, but the bird-catchers soon rob us of this pleasure. The Snow Bunting, the Brambling, and, very rarely, the Hawfinch occur.

May 15th.—I walked through Mottram and Low Cliff Wood, where the long-expected honey-flowing note of the Garden Warbler was heard for the first time this season, one week later than last year, completing my enumeration of the arrivals of our summer Warblers. After much labour to reconcile book with common names often loosely applied, I have ascertained this bird to be identical with what the nesting boys call Small Straw, what I had long thought, but, not having previously turned my attention to nests and eggs, had not proved. When I asked what sort of song the Small Straw had, they could not tell me—they only knew its slenderly-built nest. When I pointed out the Garden Warbler, they called it a Peggy; on remarking its superior mellow strain, they would say it was a Peggy with a better note than usual; the same would be said of the more varied sprightly note of the Blackcap, unless a sight was caught of his dark glossy head emerging from the thick brake or leafy boughs in which he loves to ensconce himself.

Barnsley, July, 1853.

NOTES.—No. 1.

BY MR. C. STUBBS.

Brown Rat, (Mus decumanus.)—I have, while ferreting Rats in hedge-rows, frequently seen them run to the top of the highest branches, and try to conceal themselves among the foliage till the danger is past.

Heron, (Ardea cinerea.)—A few pairs of Herons breed about here, but nowhere in sufficient numbers to be worthy the name of a Heronry. I had a fine one brought to me, which was shot just as it had captured a pike weighing about three pounds; it had struck a hole right through the fish at the back of the head. I saw three settle one day in a Rookery; the Rooks immediately drove them off, and followed them for some distance. I have never seen more than seven together, unless in nesting-time.

Kingfisher, (Alcedo ispida.)—This beautifully-plumed bird is rather common along the banks of the Thames here. I have oftentimes taken their eggs, and occasionally the young ones, but never could discover anything like a nest, only a few fish bones. I once took six young ones; they were nearly full-grown, and could fly some distance. There was a dead gudgeon and another fish, (I think it was a bleak,) in the hole: the hole smelt very bad indeed.

Green Woodpecker, (Picus viridis.)—A pair of these birds were about building their nest close to Grey's Court, a fine old mansion in this neighbourhood, last year, but they began boring so many of the trees, and made the lawns in such a mess with the chips, that they were destroyed. I saw them; they were in good feather. I never knew that they would breed so close to human habitations before. I was in Windsor Park last March, when I was startled by hearing the cry of this bird, as I thought, close to me; I looked about, and saw it fly off a tree some distance from me; it soon came on to rain after. In some counties they are called the Rain-bird. That pretty little species the Lesser Spotted Woodpecker, (*Picus minor*,) is occasionally seen and obtained about here; a boy killed one with a stone in Yansley Wood, and I have one that was shot near Park Place here. The Greater Spotted Woodpecker, (*Picus major*,) has been shot several times; a fine pair were shot at Mill End, near here, some time back.

Cuckoo, (Cuculus canorus.)—I was once out in a boat taking Reed Warblers' nests, when I found the egg of the Cuckoo in one. This was a curious nest to select, as it was continually being swayed by the wind, and, I should have thought, not large enough to have held the young Cuckoo when hatched.

Common Tern, (Sterna hirundo.)—A pair of Common Terns were shot here late last autumn; they are a rare bird with us, being so far inland, but have occasionally been met with.

Black Tern, (Sterna nigra.)—On the 23rd. of April, 1852, I saw a very fine specimen of this bird, which had just been shot here on the Thames. It was

very windy, but rather warm for the time of year. When first seen it was resting on an old pollard willow; it flew up, and kept gliding round in circles, when the man shot it. It measured twenty-four inches across the wings, and was ten inches in length. It was rather early for it to appear, and looked somewhat like its breeding here. It is quite a 'rara avis' in these parts, never, I believe, having been obtained above once or twice before. Terns are occasionally met with here, though it is so far inland; I saw one myself whilst out in a boat one day, but it flew so high and swift that I could not say what species it was.

Ring Snake, (Natrix torquata.)—I was walking between Wookingham and Tyford last autumn, when I saw a very large Snake basking in the sun. I immediately ran up and seized it by the back of the head; it twisted round my arm, and tried hard to escape, but finding it could not, it then emitted the most horrid stench I ever smelt; I was soon glad to shake it off, when it quickly wriggled off into the hedge. I think I never remember anything so nauseous, and I could not get it out of my clothes and hands for some time. This is a very wise provision of Providence, for without it the Snake seems helpless and unable to defend itself.

Henley-upon-Thames.

PROTRACTED CONTINUANCE OF INSECTS IN THE CHRYSALIS STATE.

BY STEPHEN STONE, ESQ.

In vol. ii., page 208 of "The Naturalist," the Rev. F. O. Morris records an instance of a caterpillar of the Large Egger Moth having duly passed into the chrysalis state, and in that state continued without further change through the winter: his after-statement that though alive in the spring "it subsequently proved to have been infested by an Ichneumon," sufficiently, I think, explains the reason of its so continuing.

The Ichneumon having deposited its eggs in the body of the caterpillar some time previous to its transformation to the chrysalis state, these eggs in due course produced larvæ, which at once, as is their usual wont, commenced feeding upon the body in which they had thus become domiciled. When the period of its transformation to the chrysalis state arrived, they might not have proceeded so far in their work of destruction as to incapacitate it for undergoing that change, but not being as yet fully matured themselves, their ravages would still go on, until at length they had not only rendered it incapable of undergoing a further change into the perfect or imago state, but had also in fact completely destroyed its vitality; and the life which it afterwards seemed to possess, would be only the appearance of life imparted to it by the living embryo Ichneumons within it, as a chicken enfeebled by the cold, which we enclose in a stocking, and place by the fire, in order to its

recovery, gives to the said stocking an appearance of life and motion, which it does not in reality possess.

The Ichneumons would naturally remain till the spring ere they came forth in 'propriâ personâ,' when they would be prepared in turn to deposit their eggs in the bodies of other caterpillars, and thus fulfil their mission, as agents, in common with insectivorous birds, appointed by Creative Wisdom to keep a salutary check upon the too rapid increase of species, which might otherwise become so exceedingly numerous as to overrun the whole earth, and devour "every green thing;" thus rendering the labours of the husbandman abortive, and his efforts in the cultivation of the soil fruitless. Why then will the husbandmen blindly persist in destroying these latter-named agents, for no other reason, forsooth, than because some of the species, as well as being eminently insectivorous, happen to be also in a trifling degree granivorous; but is this a sufficient reason why they should be destroyed? Suppose a farmer, acting upon this principle, were to slaughter and destroy his horses, for they too, as well as the birds, consume a portion of his produce, what would be thought of that man? Would he not be deemed an eligible candidate for Saint Luke's—a fitting subject to be placed under restraint? undoubtedly he would; and yet he really would not be acting a more insane part than his neighbours, who persist in destroying Sparrows and other birds.

Immensely as the benefits derived from the services of the horse, when put in the scale against the loss sustained by the corn, and other farm produce which he consumes, turns the balance in his favour; it would not be found to be relatively greater than the benefits derived from the services of the Sparrow, if submitted to a similar test.

Whether we reflect on the infinite wisdom which the Almighty has displayed in the ordinary provision He has made for keeping within due limits the different classes of beings He has formed, of which the habits and economy of the Ichneumonidæ, briefly noticed above, afford us a familiar example; or whether we consider His infinite goodness in a like provision for the preservation of each particular species, which to the observer of nature will in a thousand ways manifest itself, we shall scarcely fail to find awakened within us feelings of a holy devotion, of fervent piety, and of the highest adoration of Him who, although he "inhabiteth eternity"—though his dwelling-place is in the "highest heaven"—yet condescendeth to provide for the life and enjoyment of the meanest creature upon earth—of Him who

> "Gives the lustre to an insect's wing,
> And wheels His throne upon the rolling worlds."

But to those who attentively watch the operations of nature, an extraordinary provision for the preservation of a particular species will likewise occasionally present itself; the following fact, which came under my observation not very long ago, may serve as an illustration:—I had about thirty caterpillars of the Water Betony Moth, *(Cucullia scrophulariæ,)* which all passed into the chrysalis state in the autumn, having previously buried themselves in the earth contained in

a small tub, which was sunk to within two or three inches of its upper edge in a moderately dry flower-bed in the garden, and provided with a covering of net, as well to prevent the escape of the caterpillars as of the perfect insects when they emerged as such. The majority of these insects came out the beginning of the following June, but about ten or twelve individuals continued through the next summer, autumn, and winter, and till the beginning of the succeeding June, ere they made their appearance, thus having continued the greater part of two years in the chrysalis state. As no artificial means were resorted to in this instance to retard their development, I cannot but consider it to be, as already stated, an extraordinary provision of nature for the preservation of the species; for should one season prove adverse to their well-being, there is, if I may be allowed the expression, a 'corps de reserve' provided, in order to supply individuals for the following season, which may prove more propitious.

Brighthampton, August 10*th.*, 1853.

NOTES ON THE LEPIDOPTERA OF BANFF.

BY MR. T. EDWARD.

Perhaps the following notice of the occurrence and capture of a few of the rarer *Crepuscularies* of this quarter, during the present and by-gone seasons, may not be uninteresting to at least some of the readers of "The Naturalist." I give them not in order, but at random.

The Broad-bordered Yellow Underwing, (*Triphœna fimbria.*)—A most splendid specimen of this species was procured this summer by me in the Den of Eden, and is now added to my collection. This is a very rare species here, so much so, in fact, that I have never met with nor seen another but the one alluded to.

The Small Tiger Moth, (*Nemeophila plantaginis.*)—This may be a little more common insect than the last, but I have only met with two, one on the Wagle Hill, parish of Monquhitter, and the other on the Clashmach, Clashma, or Clashmack, a hill near Huntley, and which means a hill of stones, or a stony hill. They are male and female, and are both in my own collection.

The Six-spotted Sphinx, or Burnet Moth, (*Anthrocera filipendulæ.*)—Rummaging about the Bin, a large wood and district betwixt Keith and Huntley, one warm and sunny day in July last, looking for what I could see, and listening to what I could hear, I was most agreeably surprised and more than delighted at coming upon five of these gaudy little gentlemen, all within a compass of about six feet of each other, and all of which I had the good and happy fortune of *boxing*; not pugilistically, O no! for, believe me, courteous reader, I am the quietest man, I had almost said the greatest coward alive, and am a member of the "Peace Society," that is, one of the peaceful inhabitants of the quiet north, and do not in consequence

fight any. How then? it may be asked by some who may be unaccustomed to entomological pursuits and with insect hunting. Why, my answer is, simply by surrounding them, to be sure, as Pat did his foes, and then storing them all safely into my collecting-case, without either a blackened eye or a broken limb. O happy, happy Crispin! None but the persevering deserves to be rewarded. O how well do I yet remember, although it is long years ago, finding about this same spot the fragments of a species of this sort! and O how oft have I looked, and looked, and searched the place for a perfect specimen since then, but all in vain until the present instance! no wonder then that I should feel a little overjoyed, and somewhat elevated at my good luck at last.

But it may be that some of my southern brother naturalists may laugh at my foolishness in exhibiting such childish glee over what they may be able to term *quite a common species*. Well, smile away my friends. O how I glory in your mirth. 'Tis mine to love to see a merry countenance. But, my dear friends, believe me, and see you bear the truth I am about to tell you in your remembrances, namely, that although they may be quite an abundant species with you, they are very, very far from being so with us, in fact they are very rare. Another, I am credibly informed, was taken at M. Duff, also during the present season, by a servant girl belonging to Mr. W. Gregen, teacher there, but the hand that grasped it not being accustomed to finger such fragile ware, crushed it to atoms, rendering it thereby perfectly useless.

The Humming-bird Sphinx, *(Macroglossa stellatarum.)*—Towards evening of a very stormy day, a specimen of this Moth sought, by beating against a window, and obtained shelter from the then warring elements in a house in town; next morning it was secured, and is now in my collection, and to have a finer or a more complete specimen no mortal man, especially a poor one, could desire. This species is also very uncommon here.

The Vapourer Moth, (*Orgyia antiqua.*)—I have seen it recorded, but where I do not now remember, that the Vapourer is a very common insect; it may be so in some places, but I must deny its being such with us, or in this quarter; two specimens, a male and a female, are all that I have met with during all my entomological peregrinations here, and these have neither been few nor far between, and have now been continued for the space of twenty long years.

The Unicorn Sphinx, (*Sphinx convolvuli.*)—A most beautiful individual of this pretty Moth was captured a few days ago in a garden in town; it is now in my collection, and is the largest I have ever seen, and the prettiest marked; the body measures nearly three inches, the proboscis more than five, and the wings expand to above six. Other two, one of which is now in the collection of the gentleman already named, were taken in M. Duff a few weeks previous to the one above mentioned. This species is only of casual occurrence here.

The Emperor Moth, (*Saturnia Pavonia-minor.*)—Although I have never as yet had the good luck to meet with an Emperor, either Scotch, English, Irish, or French, yet I believe that the former, not to speak of the others, is to

be found in some of the more heathy portions of our country; but if it were so to happen that I and a personage of this description were to meet, I do not think that I should stand very long and cry out 'Vive l'Empereur,' that is, if I could get him by any means into my clutches. But though I have never met with the insect myself, I have occasionally found their empty cocoons amongst the heath when on my oological and ornithological excursions through the hills here; and I am credibly informed that the Moth itself has been found, but of course rarely, so that I must find it a place in our fauna, and live in the joyous hope of the "good time coming."

The Death's Head Sphinx, (*Acherontia Atropos.*)—This species is also, or at least has been, found with us. My highly-respected, and dearly-beloved friend by all who knew him, and whose death was universally regretted, the late, alas! Rev. Mr. Smith; and than whom a better or a kinder-hearted being, save one, never trod this beauteous earth of ours, possessed one of these Moths, which was taken in a potato field at Mount Clary, the seat of Alex. Morison, Esq., of Bognie; it was a pretty specimen; I have seen it often, and each time I did so the more I prized it. But although I have searched all the potato fields round this anxiously and annually, and other places where the species is most likely to be found, and I do wherever I go, I have never as yet met with a specimen myself, so that I must set it down in this meagre list of mine as one of the rarer of the Lepidoptera of Banffshire.

Banff, October 18*th.*, 1853.

THE PROPAGATION OF HARDY TREES AND SHRUBS.

BY J. MC'INTOSH, ESQ.

(Continued from page 152, *Vol. III.)*

ORDER XVII.—XANTHOXYLACEÆ.

The species found in British gardens are comprised in the following genera:—

Xanthoxylum—Flowers, bisexual; calyx, three-five-parted, with an equal number of petals and stamens; carpels, one-five, two valved; leaves, simple, ternate, abruptly and impari-pinnate.

Ptelea—Flowers, bisexual; calyx, four-five-parted; petals, four-five; stamens, four-five; fruit, compressed, two-three-celled; cells, winged; leaves, of three leaflets, rarely of five leaflets.

Ailantus—Flowers, polygamous; calyx, five-cleft; petals, five; stamens, ten, unequal; styles, three-five, arising from the notches of the ovaries; carpels, three-five, membranous, one-celled, one-seeded; leaves, abruptly or impari-pinnate.

GENUS I.

Xanthoxylum, (*Toothache Tree,*) Dioecia Tri-Pentandria.—This is a low deciduous tree, native of North America, from Canada to Virginia, in woods near rivers. The bark and capsules are of a hot acrid taste, and are used for relieving the pains of the toothache; a tincture of the bark is also used for

curing rheumatism, the bark being imported from New York, and sold in Covent Garden: the tree is common in most collections. Flowers, yellowish, with red anthers; of easy culture in any common garden soil, and is readily propagated by cuttings of the roots, or of the branches, by seeds and layers.

Genus II.

Ptelea, (*Shrubby Trefoil,*) Monœcia Tetra-Pentandria.—A shrub or low tree from North America, producing small greenish-white flowers in clusters, easy of culture in any common soil, propagated by cuttings in the autumn under hand-glasses, or by seeds. This plant should be pruned up to a single stem, when it forms a handsome low tree.

Genus III.

Ailantus, (*Ailanto,*) Polygamia Monœcia.—This tree is a native of China; in France it is much planted as a tree for shading public walks, etc., in company with the Tulip Tree, Horse-chestnut, the Plantain, etc. It grows in any soil, but likes the shade; in France we have seen large trees growing in chalky soils, where scarcely any other tree could exist. It is easily propagated by seeds, suckers, roots, and cuttings. We would strongly recommend this tree to the attention of coppice-wood planters, for various useful purposes.

ORDER XVIII.—CORIACEÆ.

This order consists of only one genus which is quite hardy; there are two other species which are half-hardy.

Genus I.

Coriaria, (*Coriaria,*) Dioecia Decandria. A deciduous shrub from four to five feet high. In its native country, namely, the south of Europe and north of Africa, it is used for tanning and for dyeing black. M. Dumont asserts that the leaves and berries are deadly poison both to man and beast. In France the leaves have been used to adulterate senna leaves, and have been known to produce fatal consequences, and M. Fée says that several of the French soldiers, when in Catalonia, became stupified by eating the berries, and that three of them died.

ORDER XIX.—STAPHYLEACEÆ.

This order consists of one genus only, namely,

Genus I.

Staphylea, (*Bladder Nut Tree,*) Pentandria Di-Trigynia.—Deciduous shrubs propagated by seeds, suckers, and cuttings; the seeds should be sown as soon as ripe. The nuts of *Staphylea pinnata,* in some parts of Europe, are strung for beads by the Roman Catholics. In Germany the kernels are eaten by children, and Gerrard says that in his time they were eaten, though not relished, in England.

ORDER XX.—CELASTRACEÆ.

Shrubs or low trees, chiefly deciduous, natives of both hemispheres, chiefly remarkable for the form and colour of their fruits. All the species are readily propagated by seeds, by cuttings in sand, and by layers. The genera are six.

Euonymus—Sexes, hermaphrodite; calyx, four-six-lobed; petals, four-six, inserted in the disk; stamens, four-six; fruit, a dehiscent capsule of three-five cells; seeds, with an aril; leaves, mostly opposite.

Celastrus—Sexes, mostly hermaphrodite; fruit, a dehiscent capsule of two-three cells; seeds, without an aril; leaves, alternate.

Nemopanthes—Sexes, polygamous or dicœcious; calyx, minute, four-five-parted; petals, five; fruit, an indehiscent berry, three-four cells and three-four-seeded.

Maytenus—Sexes, polygamous; calyx, five-cleft; petals, five; stamens, five; fruit, a dehiscent capsule of one-four cells; seeds, few in bottom of cells, each with an aril; leaves, alternate.

Cassine—Sexes, hermaphrodite; calyx, minute, four-five-parted; petals, five; fruit, an almost dry drupe, its nut indehiscent, slender, of three cells and three seeds, each pendulous from the top of a cell; leaves, opposite.

Hartogia—Sexes, hermaphrodite; calyx, four-five-cleft; petals, four-five; stamens, four-five; fruit, a dry drupe, its nut indehiscent, ovate, of two cells and two seeds; leaves, opposite.

Genus I.

Euonymus, (*Spindle Tree,*) Tetra-Hexandria Monogynia.—There are about twenty-five species, besides mixtures, of *Euonymus* known in gardens. The *E. Europœus* is common throughout Europe; its wood, from the earliest ages, has been used in making various domestic utensils, particularly for making netting-needles and spindles. In England it is employed in the manufacture of musical instruments; in Scotland it is employed, with the wood of *Cytissus alpinus,* or Alpine Laburnum, in making noggins or luggies, that is, small vessels for porridge, and drinking out of; in Germany the small branches are employed for the shanks of tobacco pipes, the wood split into thin pieces is made into what are called whisks for driving away flies, and a charcoal is made of the shoots, which is much valued by artists, from the lines made by it being easily effaced. This charcoal is made by putting shoots of two years' growth into an air-tight iron tube, and then into a fire till it becomes red hot; the tube is then taken out, and allowed to become cool before the charcoal is withdrawn. Their fruit has been employed by dyers, who derive green, yellow, and red from them; green is obtained by boiling the seeds with alum, yellow by boiling the seeds alone, and red by using the capsules: the fruit and inner bark are purgative and emetic. The principal use of the Spindle Tree in Britain at the present time is for butchers and cooks for skewers. In plantations the species are very interesting in autumn, by their numerous pendant capsules of a bright red colour, or pure white, and their white or orange-coloured seeds, spreading rays of brilliancy over the departing season. It is propagated by seeds, layers, and cuttings in sandy soil under a hand-glass.

Genus II.

Celastrus, (*Staff Tree,*) Pentandria Monogynia.—The stems of *C. secundum* are woody and flexible, and twist themselves round trees or shrubs, girding

them so closely as in a few years to destroy them; as a free-growing twiner it deserves to be more cultivated; propagated by seeds, cuttings, or layers. *C. bullatus* is a low shrub, native of Virginia; it rarely ripens seeds in England, but is propagated by cuttings and layers. There are several half-hardy species, which, we have no doubt, will yet prove to be quite hardy, as they are principally from the Cape of Good Hope.

GENUS III.

Nemopanthes, (*Nemopanthes,*) Polygamia Dicœcia.—This plant is sometimes found in English gardens under the name of *Prinos lucidus;* it is a deciduous hardy ornamental shrub, propagated by cuttings of the young wood under glass, suckers, or layers in a sandy loamy soil.

GENUS IV.

Maytenus, (*Maytenus,*) Polygamia Dicœcia.—This is a handsome evergreen shrub, flowers of a greenish yellow, well deserving general cultivation; by cuttings.

GENUS V.

Cassine, (*Cassine,*) Pentandria Monogynia.—Of Cassine we have two hardy species, namely, *C. Maurocenia,* (the Hottentot Cherry,) a native of Ethiopia, and *C. Capensis,* (the Cape Phillyrea,) a native of the Cape of Good Hope; by cuttings under glasses and by seeds.

GENUS VI.

Hartogia, (*Hartogia,*) Tetra-Pentandria Monogynia.—Of this genus we have only one hardy species, namely, *H. Capensis,* or Cape Hartogia; there is a narrow-leaved variety of *Cerasus laurocerasus* frequently sold in the nurseries for this species; propagated by cuttings and seeds.

(To be continued.)

ANAGALLIS ARVENSIS, ETC., IN FLOWER NOVEMBER 14TH.

BY J. ROSE, ESQ., M. D., R. N.

DURING the first ten days of November the temperature was unusually mild, with bright sunshine during the day, in fact a sort of second spring, and admirably adapted for agricultural operations. The green blade of the recently-sown wheat is now apparent, and near Rowner and Titchfield fresh foliage is seen on some of the branches of the trees, while the rest of the leaves have fallen, or are yellow and withered; I think this fact was mentioned by some of your correspondents last year. Many of the *Compositæ* and *Umbelliferæ* are still in flower, and the beautiful *Anagallis arvensis,* or Poor Man's Weather-glass, as well as several species of *Stellaria,* still adorn with their modest bloom the fields and hedges in this neighbourhood. This period of the year is calculated to call forth reflections of a somewhat melancholy but salutary character, and reminds us of the words of a learned and pious bishop:—

"See the leaves around us falling
Dry and withered to the ground;
Thus to thoughtless mortals calling,
In a sad and solemn sound:—

Sons of Adam, (once in Eden,
Where, like us, he blighted fell,)
Hear the lesson we are reading,
Mark the awful truth we tell.

Youth on length of days presuming,
Who the paths of pleasure tread,
View us late in beauty blooming
Number'd now among the dead.

What though yet no losses grieve you,
Gay with health and many a grace;
Let not cloudless skies deceive you,
Summer gives to autumn place.

Yearly in our course returning,
Messengers of shortest stay,
Thus we preach this truth concerning,
Heaven and earth shall pass away.

On the tree of life eternal
Oh, let all our hopes be laid!
This alone, for ever vernal,
Bears a leaf that shall not fade."

Haslar Hospital, Gosport, November 15th., 1853.

Miscellaneous Notices.

A Black Hare, (Lepus timidus.)—I saw to-day, in the hands of a bird and animal preserver in this town, a Black Hare, which was killed (coursed) at Enville, the seat of the Earl of Stamford, and was intended to be preserved for his Lordship's collection. Black wild Rabbits are by no means uncommon, and I examined the specimen in question minutely, but could not detect any symptom of a cross.—H. Saunders, Elderfield, near Kidderminster, November 5th., 1853.

Occurrence of the Honey and Rough-legged Buzzards, (Pernis apivorus and Buteo lagopus,) *in Banffshire.*—I had sent me the other week from Gardenstown, near to which place it was shot, a most splendid specimen of the Honey Buzzard, or Bee-Hawk; it is a female, and in excellent plumage. I had also sent me yesterday from Troglen, the seat of Sir Robert Abercromby, of Birkenbay, a pretty Rough-legged Buzzard; it is a very large bird, and also a female: these birds are rare with us.—Thomas Edward, High-Street, Banff, November 11th., 1853.

The Merlin, (Falco æsalon,) *near Banff.*—I shot a beautiful male specimen of the Merlin on the 15th. of August, on the farm of the Mill of Boyndie, near Banff: it is a rare bird so far north.—George Donaldson, Mill of Boyndie, near Banff, September, 1853.

The Blackstart, (Sylvia tithys,) *near Chichester.*—Being a subscriber to "The Naturalist," I take the liberty of writing to inform you that I have purchased a female Blackstart, which was shot by a man of the name of Richard George, this day. I send you this information, as it is of rare occurrence near Chichester, and I think it is rather early for its appearance in England.—G. Jackson, Chichester, October 25th., 1853.

Variety of the Rook, (Corvus frugilegus.)—Last spring I shot a young Rook with a white spot on the throat, and the middle claw of each foot was pure white, whilst the others were of the natural black colour.—W. S. M. D'Urban, Newport, near Exeter, November 12th., 1853.

Occurrence of the Pied Flycatcher, (Muscicapa atricapilla,) *in Devon, and the Black Redstart*, (Sylvia tithys,) *in Somersetshire.*—On the 23rd. of August I saw killed by Mr. James Dodd, in his garden at Plymouth, a specimen of that rare bird in Devon the Pied Flycatcher; its habits were very similar to those of the common species, *(Muscicapa grisola.)* I also observed on the 2nd. of the present month, near the village of North Petherton, Somerset, and about twelve miles from the Bristol Channel, a Black Redstart flitting about on the roof and chimneys of a cottage; the weather had been very boisterous during the previous night.—John Gatcombe, Wyndham Place, Plymouth, November 14th., 1853.

Malformation in the Bill of a Starling, (Sturnus vulgaris.)—I have the head of a Starling shot on this town moor, the lower mandible of which is five-eighths of an inch longer than the upper; is not this rather extraordinary? the upper portion of the bill is of the usual size and length: this bird was in remarkably fine plumage when shot last Monday.—George Hodge, Newcastle-on-Tyne, September 17th., 1853.

Second Note on a Wild Bee, (Bombus terrestris?)—In the latter part of last June, I was enabled to see personally the result of the Bees' workmanship, referred to in a former paper. We carefully removed the tin awning, but it was under very fearful apprehensions, for my friend told me he had seen no traces of them all the spring. The nest had naturally suffered from the ravages of insects, for we found the roof perforated in many places, and from what I saw, I still fancy it formed of strips of the common bean-stalk, or the tree balsam. The poor tenants had all perished, and, from the mangled remains, had doubtless been frozen by the cold, and then become the prey of hardier insects; no trace of any store of food was found, but that might have shared a similar fate to their own. From the wings and pieces of the trunks of the Bees found, I believe they were the common Humble Bee, *(Bombus terrestris,)* though I am aware they, after the manner of Wasps, have an underground house. I regret I was unable to procure a specimen, which I should have greatly desired, as I fancied, from the reports I had given me, that it might have been a species of Solitary Bee, (*Anthidium manicatum* of Fabricius,) and which, Kirby and Spence say, select cavities of old trees, key-holes, etc. Among the foliage of the ivy, not two feet from the old nest, was, at the time of our search, a Robin's nest, containing six eggs; doubtless the old birds of last year had returned to a spot rendered dear to them by former prosperity in all respects.—G. R. Twinn, Bawburgh Hill, near Norwich, August 11th., 1853.

A fine specimen of *Sphinx convolvuli* was captured about three miles out at sea by C. Dobson, and is now in my collection. Query.—Was this specimen migrating, or the contrary?—D. Ferguson, Redcar, September 14th., 1853.

Acherontia Atropos.—Another specimen was taken a few days ago by G. Reade, Esq., Guisbro', and is now in the hands of Daniel Duck, druggist, at that place.—Idem.

Capture of Vanessa Antiopa.—I have great pleasure in recording the capture of a fine pair of that rare Butterfly, *Vanessa Antiopa.*—One was caught by a friend, September, 1852, on the heath; the other on the grounds of Mr. Biggs, Loampit Hill, near Lewisham. This last adorns my cabinet.—Larret Shields, Dartmouth Grove, Greenwich, October 23rd., 1853.

Colias Hyale.—The Rev. Henry Hilton, of Milstead Rectory, near Sittingbourne, has informed me that he captured a specimen of this Butterfly the present summer, I believe near Dover.—F. O. Morris, Nafferton Vicarage, October 27th., 1853.

Review.

The Natural History of the Birds of Ireland, Indigenous and Migratory, containing descriptions of the habits, migrations, occurrence, and economy, of the two hundred and sixty-one species comprised in the Fauna. By John J. Watters, Associate Member of the University Zoological Association. Dublin: James Mc'Glashan. London: W. S. Orr, and Co. Edinburgh: John Menzies, 1853. p. p. 300.

The object of the writer of this little work, appears to have been to offer to the public an authentic and careful account of the birds of Ireland, at such a price as to allow every one who wished for such information to obtain it. The habits and history of two hundred and sixty-one birds are given; and much valuable information respecting them is contained in these pages. It is a matter of great regret, that Ireland should possess so few observant Naturalists; for although there are bright exceptions, there is no doubt that the study of Natural History is generally much less cultivated in Ireland, than in this country. Had it been otherwise, it is highly probable that many

more than two hundred and sixty-one species of birds would have been recorded. Mr. Watters has done good service to the cause of science, by giving as it were, an abstract of what is known at present of the Irish birds, and we sincerely hope that the perusal of his book, may induce many to enter more at large into the subject.

The author does not give descriptions of the birds, but many interesting accounts and anecdotes of their habits are given; Mr. Watters is an out-of-door Naturalist, and supplied many facts as to various birds to the late W. Thompson, Esq., of Belfast, which appear in his valuable work on the same subject as the book now before us. We give one or two short extracts taken at random as specimens of the style of the work. Speaking of the nesting of the Curlew, he says—

"On some barren and desolate moor, tenanted by the Grouse, Moor Harrier, and Lizard, the Curlew prepares an artless nest on the ground, in a dry tuft of grass or rushes, lined with withered herbage. Sometimes it is formed in a natural hollow or depression, smoothed by the bird, and lined with leaves, where the eggs are deposited, four in number, of a pale green, blotched with brown. During the breeding season, these solitary tracts frequented by the Curlew appear replete with animation. From early dawn to the last hour of twilight, their incessant screaming and repeated motion afford a relief to the otherwise changeless and dull monotony of the scene; on the nest being approached, the male and female assail the obnoxious intruder with noisy screams, beating at him with quivering wings, and, that failing, run and skulk before, in hopes of decoying and deluding him."

One more extract of a somewhat different character. A tame Spoonbill is a novelty, certainly a rarity in this country, so we give Mr. Watters' account of his behaviour when domesticated.

"A male bird at one time in the possession of an ornithologieal friend, beeame so familiar as to proceed upstairs and enter the breakfast-room regularly during meal hours, and appropriate to itself, at all seasons, the hearth-rug, where it would nestle down and enjoy the warmth of the fire. Having at one time been scalded by accident, it ever after evinced the utmost horror of the tea-urn,—rising quickly from its resting position, and walking away indignantly, not returning until the enemy had been displaced, when it resumed its position. If annoyed by young children, it walked quickly round the room, and selected an unoceupied chair, if at a distance from the wall, and, perching upon it, would take bread from the hand, or bread and milk in a tea-eup. Its usual resting-place was the top of a pump in the eentre of an out-yard, on which pereh it would often remain motionless for hours."

We should be glad to find that this little book had an extensive circulation, and that another edition of it was required. This could not take place without much good being effected.

The Retrospect.

I perceive in the "Retrospect" of "The Naturalist," for the last month, some remarks by Mr. Stephen Clogg, of East Looe, in Cornwall, upon my article on the "Wagtails," which I will endeavour to answer, only premising, that, as no Naturalist, but an observer of Nature only, I feel considerable diffidenee in entering on the discussion. He states that the *Motaeilla alba*, is not the Pied Wagtail, on this head I will only refer him to Linnæus, Latham, Ray, Gilbert White, and Bewick, and especially to the History of Selborne; Mr. Bennett in his Edition of 1837, takes no notice by way of note or otherwise, of there being more than *three* kinds of this bird, and I take the word *alba*, as merely contradistinguished from *flava*,

and *cinerea*. With respect to the black chin, that was the result of my own observations, at nesting time, when the sex is most certainly determined, and therefore I considered it a distinguishing mark, for that there is a great flocking of *Hens*, like Chaffinches in Autumn, I am certain from actual observations. Mr. Clogg, next refers to the song; now this is really a matter of opinion, and it has always appeared to me, that Naturalists have somewhat strained this matter. There are many birds, which if the Wagtail be a singing bird, may, in the same sense, be said to have a song, for instance, the Swallow, the Turtle, and the Golden-crowned Wren, which last is indeed almost entitled to that appellation; but as to the Wagtail, I would especially refer Mr. Clogg to the Rev. F. O. Morris's beautiful work, at vol. ii. page 128.

With respect to the five species, I suppose there is scarcely any one who has had more opportunities than myself, of observing and obtaining specimens of these birds, and I perfectly call to mind the birds which are now said to be distinct species, having possessed both, especially the so-called *Motacilla alba*, which I always looked upon as fine specimens of the Pied Wagtail, and never certainly should have dreamed of calling them anything else. The second I considered either the young of the Grey Wagtail, or the female of the Yellow; and I will only say that it is impossible for me successfully, nor would it be seemly, to offer any ideas of my own in opposition to those of such excellent naturalists as *Mr. Yarrell*, *Mr. Gould*, and the *Rev. F. O. Morris*, who, however, himself says, "two species are now *believed* to have been hitherto included under one, (vol. ii., page 126,) putting it no higher, and declining to give a decisive opinion, and coming to the conclusion, at page 134, that "all this seems like 'confusion worse confounded,'" in which I heartily agree with him. If the *Motacilla alba* of modern ornithologists be a distinct species, it is a *larger* bird, and breeds later, or is said to do so, and to be migratory. The whole subject was a difficult one, and at the time I wrote my article, now years ago, although I saw no reason to alter it afterwards, the Grey Wagtail was so scarce that speculations were fair enough, however I myself acknowledged that they were only such, although the varieties we meet with amply supported the probability of such a suggestion. I quite agree with Mr. Clogg that a certain liberality should be exercised, but I am so opposed to anything like "making species out of varieties," or calling birds "British" that have no title to the name, that I may be led into the other extreme. Birds to be "British" must, I apprehend, either breed here, remain a considerable time, or in considerable numbers, and at regular intervals; all others should, I think, be classed as birds that have occasionally visited our shores. In this view, therefore, admitting the existence of the *Motacilla neglecta* for the sake of argument, I do not admit it as a British bird. The article which gave rise to this controversy was a mere sketch, the result of nothing but actual observation, although of course I am familiar with most works on the subject, but in future I will state the opinions of others as well as my own, although I am content to be thought ignorant if I feel confident that I am correct.—O. S. Round, Lincoln's Inn Fields, December, 1853.

Lepidoptera round Exeter.—I have read Mr. E. Parfitt's account of the Lepidoptera about Exeter, in your number for November, and, living as I do, only three miles from Exeter, and one from Topsham, I was surprised to see that he found many insects scarce, which I have observed as being abundant. Perhaps a few remarks may not be uninteresting to the readers of "The Naturalist." Mr. P. says that he has not heard of the capture of the Eyed Hawk Moth, (*Smerinthus ocellatus*,) in this neighbourhood; but F. W. L. Ross, Esq., of Topsham, has several specimens which were captured in that town, and I have one in my cabinet taken there also. Of the Lime Hawk Moth, (*S. Tiliæ*,) I bred a fine pair last spring from larvæ taken in the preceding August, and two others died in pupa. The Privet Hawk Moth, (*Sphinx Ligustri*, far from being uncommon, is very numerous both in the larva and imago; I have bred and captured more than half-a-dozen here this season alone, and two were taken within ten minutes of each other at the same flower; in many specimens the bands on the hinder wings are white instead of pink, which is the usual colour. The Elephant Hawk Moth, (*Metopsilus elpenor*,) I have found plentiful in June, hovering over the Rhododendrons then in flower. I took five this year, and a larva was brought me in September; last year I saw three larvæ which a boy had offered for sale to a bird-stuffer in Exeter. The Death's Head Hawk Moth, (*Acherontia Atropos*,) has been rather numerous this year in this neighbourhood; Mr. Ross had four of the imago and two of the larvæ, all taken near Topsham, during the last summer and autumn. As to the three specimens of the Convolvulus Hawk Moth, (*Sphinx*

convolvuli,) in the fine museum of Mr. Ross, the first was taken on the Exe, about eighteen years ago, the second, a female, was struck down by a Sparrow in one the of streets of Topsham, September 1841, and the last, a fine male, was taken a few days after, asleep on some fishing-nets near the river, from which it appears that this species has a partiality for the neighbourhood of water. Mr. P. says he never saw a Humming-bird Hawk Moth, (*Macroglossa Stellatarum,*) at rest, but they frequently pitch on walls, and Mr. Ross has one taken asleep in the house September, 1847. The larvæ of the Goat Moth, (*Cossus Ligniperda,*) were very plentiful in 1851, but I have not seen any since. No mention is made of the following Moths, all of which occur in this neighbourhood:—the Lappet Moth, (*Gastropacha Quercifolia*) the larva of which feeds on the thorn—occurs occasionally; the Brown-tail and Gold-tail Moths, (*Euproctis chrysorrhœa*, and *E. auriflua,*)—not very numerous; the Scarlet Tiger, (*Hypercampa Dominula,*) —not rare at Topsham; Red Arches, (*Miltochrysta miniata,*) I have taken two of these beautiful little Moths here. Dun Footman, (*Lithosia griseola,*)—common in the grass during the summer months; the Lesser Broad Border, (*Triphœna Janthina,*)—not uncommon. *Agrotis exclamationis*, I have found very abundant. In conclusion I will take the opportunity of mentioning that the larva of the Scarce Dagger, (*Acronycta auricoma,)* was taken on a nut bush, last September, in Mr. Ross' garden; another occurred in the same place in 1845.—W. S. M. D'URBAN, Newport, near Exeter, November 12th., 1853.

White Variety of Lamium amplexicaule.—In vol. iii. page 255, of "The Naturalist," I read an account of a white specimen of the *Lamium amplexicaule*, (Henbit Nettle,) having been found in the neighbourhood of Aberyswith, by Messrs. C. and J. D'Arcy, and they wishing to know if any of your readers could inform them if this variety is often met with. Being at liberty this afternoon, I took a ramble in search of this very variety, and I found it more plentiful about here than the crimson one, for where I found one of the crimson, I should think I found twenty of the white variety.—G. JACKSON, Chichester, November 1st., 1853.

Plants with unnaturally White Flowers.—In answer to C. and J. D'Arcy, I wish to state that the colour of the flower, if there is no other distinction, is not allowed to constitute a species botanically. The best answer is the following extract from Lindley's article "Botany," in the "Library of Useful Knowledge:"—"It is probable that whiteness, or that kind of paleness which constitues white, is owing to the chromule not being completely elaborated. This may be inferred First, from the analogy between this colour and blanched plants; Second, from the much greater number of white flowers in northern than in equatorial regions; and Third, from a considerable number of flowers which are born white, acquiring some other colour before they die, if exposed to solar light." Most of the plants in the list below I have found, where they were much shaded, or after a long continuance of cloudy, showery, and cold weather, some exceptions of course there are, within the last three years with white flowers:—*Geranium Robertianum*, *G. molle*, *Prunella vulgaris*, *Cnicus palustris*, *Thymus acinos*, *Ballota nigra*, *Bartsia odontites*, *Calluna vulgaris*, *Campanula rotundifolia*, *Hyacinthus non-scriptus*, *Orchis Morio*, with many intermediate shades of colour, and all in the same field; *Betonica officinalis*, ditto, *Viola odorato* ditto, and *Veronica hederacea*. The "Botany and Geology of Malvern," by E. Lees, Esq., is the authority for the two next—*Digitalis purpurea*, and *Orchis mascula*, a pure white, and without spots on the leaves, continuing white in a cultivated state, which is not generally the case with the rest. *Colchicum autumnale*, is sometimes found white according to Withering.—W. C., Stratford-on-Avon, November 9th., 1853.

BRITISH MUSEUM NATURAL HISTORY

The Querist.

I should feel greatly obliged if any correspondent of "The Naturalist," who has had the opportunity of observing, would be kind enough to answer the following queries respecting the Domestic Swan:—Are the feet and legs ever slate-coloured, or sooty grey? If so, at what age do they become black? Is the tubercle at the base of the bill covered with feathers in the young bird, if so, at what age is it bare? Is it conspicuously large in the first Autumn? At what age are the young birds able to fly, and when may they be said to have attained their full size? What is the usual number at a brood?—T. SOUTHWELL, Fakenham, Norfolk.

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Contributions have been received, up to Jan. 17th., from the Rev. W. W. Cooper; —Mus;—G. Jackson, Esq.;—J. P. Fernie, Esq.;—C. W. Rothery, Esq.;— S. Clogg, Esq.;—Mr. T. Edward;—J. W. Eccles, Esq.;—Mr. M. Westcott;— Rev. Dr. Landsborough;—W. Sawers, Esq.;—R. B. Cooke, Esq;—Rev. F. O. Morris;—H. Smurthwaite, Esq.;—J. Dixon, Esq.;—J. Gatcombe, Esq.

To M. E.—Either Yarrell or Macgillivray, or Morris's "British Birds," now publishing, which has the advantage of excellent coloured figures of all the Birds.

Will J. L. J., of Winchester, favour us with his name.

Mr. Clogg's paper was received too late for the current number.

J. K. Sterndale.—They are the cocoons of *Trichiosoma lucorum*.—See "The Naturalist," vol. i., page 150, for a full account.

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M. D., Driffield;—Books for Review, and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row, London.

A GLANCE AT THE FEATHERED RESIDENTS IN, AND VISITANTS TO, THE GROUNDS OF TERRICK HOUSE; WITH A FEW REMARKS FROM PERSONAL OBSERVATION UPON THEIR HABITS AND PECULIARITIES.

BY S. STONE, ESQ.

In the few remarks I may have occasion to make on the habits of the birds I am about to bring under notice, I may be able to offer but little, if anything, new, or differing essentially from that which may be gathered from the various works upon Ornithology, published or being published; but impressed with the belief that it is possible many readers of "The Naturalist," may not only be prevented by the nature of their avocations from making observations for themselves, but may also be precluded by the want of pecuniary means from partaking in the advantages to be derived from the perusal of Ornithological works, which if good, must necessarily be expensive; believing also in the desirableness in Ornithological as well as in spiritual matters, of each one giving to the rest the "benefit of his experience," and that the only way to arrive at the truth in investigating any subject, is to bring together every fact connected with the subject it is possible to collect on either side; I am induced to offer the result of my observations to the readers of "The Naturalist," trusting that it may not be wholly valueless, although possibly as the agricultural operation of "paring and burning," is advantageously practised upon some descriptions of land, so might the like operation, and that to a considerable extent, be performed with corresponding benefit upon my papers; this however is a point which I will leave the reader, that is, if I should chance to have one, to decide.

Birds and other animals are found to vary somewhat in their habits, at different times in different localities, and also in different individuals; we cannot therefore hope to meet with a history of birds, quadrupeds, etc., approaching completeness, until a perfect knowledge of these various habits and peculiarities is gained, and the only way to obtain this knowledge is for each district to be provided with its "constant observer," and for each observer to publish the result of his observations, for which purpose the pages of "The Naturalist" are specially adapted; the immense number of interesting facts already recorded therein renders this magazine of great value, and it cannot fail of materially assisting in the advancement of science.

To recline upon a well-cushioned sofa in a well-appointed drawing-room, gazing upon the beaming countenance of some "fair denizen of earth," or listening to the music of "the last new opera," her fair fingers cause to proceed from the instrument at which she is seated, or to the words of a favourite air, that opera contains, warbled from the sweet throat, may be a situation enjoyable enough, especially in winter; but give me, in summer, a seat on or near the top of some "greenwood tree," let me listen to the music of "the minstrels of the grove," as they sit warbling their "native wood notes wild," and pouring forth

BRITISH MUSEUM NATURAL HISTORY

hymns of praise to their Great Creator; let me gaze on the fair forms of these "free denizens of the air," as according to their several habits, they may be seen, now flitting from spray to spray, now mounting on soaring wing, now dropping from a neighbouring tree top to the shelter of the underwood, now sailing about in the upper regions of the air "with wings expanded and motionless," now dashing with impetuous velocity round the tower of the distant church, now skimming the surface of pond or lake, now rowing placidly and noiselessly upon, now splashing, flapping, and diving noisily and impetuously through and under its waters, now cleaving the liquid air in straight, rapid, arrow-like, and onward flight, now describing a series of semicircles, or dancing about on the wing, "with odd jerks and gesticulations," now darting from a neighbouring thicket to pick up, at the distance of several paces, some small insect; you deem it next to impossible that it could have discerned so small an object at so great a distance, and apparently concealed too, amongst the herbage, the fact however of its darting directly to the spot, and then and there seizing upon the said insect, convinces you that it must have done so, and you infer from the circumstance that its organs of vision must have telescopic, microscopic, or other powers which your own have not.

Birds were considered by the Rev. Gilbert White, "to be somewhat wild and shy in proportion to their size," to this might be added, they are also wild and shy in proportion to the degree of persecution they meet with; it is astonishing the confidence most species will exhibit, when for any length of time they have met an asylum, and a consequent immunity from persecution and annoyance: and here I cannot refrain from expressing my entire concurrence in, and warmly pressing upon the attention of others, the humane and most excellent suggestion of your correspondent, Robert Gray, Esq., that the use of the telescope might supersede that of the deadly fowling-piece, (See "The Naturalist," vol. i. page 122.) A circumstance which occurred to myself but yesterday, October 26th., serves to place the advantages that might accrue from the use of the former instrument over the latter, in a strong light. I was walking in the neighbourhood of Cokethorpe Park, when a bird flew past, and at the distance of about a hundred yards beyond me, alighted on a spray in the hedge, where it remained for several minutes; the bird had so much the appearance of a Cuckoo, (*Cuculus canorus*,) that I felt more than half inclined to set it down as one, still it is possible that it might have been the Merlin, (*Falco æsalon.*) I was prevented from approaching nearer, even had the bird been disposed to have permitted it, by an insurmountable fence which intervened, and alongside which I was walking. Now a gun would have been of no manner of service in this instance, while a telescope would have been of the greatest use, for it would have enabled me to have placed the identity of the bird beyond a doubt; in this I should have felt much interested, never having personally met with an instance of the Cuckoo remaining in this country so late in the season as this, by nearly two months. This is one of the many instances in which the telescope might be advantageously employed

instead of the gun; it frequently happens that we merely wish to ascertain to what species a bird may belong; this the gun will only enable us to do by possessing ourselves of the dead or mutilated body, which may be of no use to us whatever, while the telescope would enable us as effectually to satisfy ourselves upon the point, without the sacrifice of the life of the bird, which cannot fail greviously to mar the pleasures of the humane ornithologist's studies, besides tending seriously to lessen his opportunities of study. We can generally, too, approach birds sufficiently near to identify them with a good telescope, while to approach them within gunshot is often, from their wildness, shyness, and wariness, extremely difficult. Could the use of the gun be entirely dispensed with,

"A consummation
Devoutly to be wished,"

this shyness and wariness in birds would soon wear off; we should then experience comparatively little difficulty in approaching them, for the purpose of observing their habits, and that in a far more satisfactory manner than we are now enabled to do.

The grounds of Terrick House, the residence of one of my three brothers, J. S. Stone, Esq., have afforded the feathered tribes an asylum for several years past. Within the limits of these grounds no gun is ever discharged; nor nets, nor traps, nor other engines of destruction allowed to be used; here the birds are at full liberty to enjoy themselves as best they may; all are free to come, and free to go; free to pursue the round of courtship, marriage, nest building, laying, incubating their eggs, and rearing their young; welcome to the shelter its evergreens afford from the blasts and storms and snows and cold of winter; welcome to the protection those evergreens, as well as deciduous trees and shrubs, afford from the powerful rays of a noontide summer's sun, and its consequent parching heat, tempering that heat, and diffusing a delightful and refreshing coolness around; welcome to partake of the fruit or vegetables, or any other fare the place affords; welcome to disport themselves, if they be of aquatic habits, upon its waters; welcome, and more than welcome, to solace themselves, their partners, and the inmates of the house with their music.

The consequence of this freedom from molestation is, that the Barn Owl breeds annually in a neighbouring barn, or Dove-house, or hollow tree, changing from one to another as circumstances may render it necessary, or desirable so to do. There is something wayward, capricious, and inconstant in the way in which it produces its eggs, both as regards number and the periods between their production; for I have found the nest containing young ones which varied very considerably in their respective ages; thus affording presumptive evidence that the eggs had been laid at long intervals. I have known it produce four eggs at regular intervals of three days, commencing the task of incubation upon the first and each succeeding egg as soon as laid;* and

* See "The Naturalist," vol. i., page 62, for a confirmation of this curious fact.—B. R. M.

I have found the nest containing six eggs, none of which appeared to have undergone the process of incubation in the slightest degree.

Some difference of opinion appears to exist as to whether this species hoots or not. Sir William Jardine says that it does, and that he has shot it in the act. "This," observes Waterton, in his usual straight-forward manner, "is stiff authority, and I believe it because it comes from the pen of Sir William Jardine;" but though he freely allows the faculty of hooting to this one individual, he denies it to the rest of the species. Now I also most implicitly believe that when Sir William Jardine made the statement he felt fully convinced, and had every reason to believe, that that statement was correct; and so indeed it may have been, but a circumstance, which occurred to myself, tends to shew that it is just possible that even Sir W. Jardine may have been deceived in the matter; for we are all, more or less, fallible; unless we make an exception, which some will insist on, in favour of His Holiness the Pope. The circumstances I have alluded to is this:—In the latter part of April, 1851, I was in want of a specimen of the Sedge Warbler, (*Salicaria arundinacea*,) and had accordingly gone out with the gun to search for one; when from a bush, about twenty yards distant, I heard its well-known voluble and imitative notes. I looked in the direction the sound indicated, and there in the midst of the bush, which was an isolated, and not very large one, I perceived what I considered could be no other than the bird I was in search of, and to whose song I was listening: there was no other bird to be seen, and the leaves were not sufficiently expanded to offer much concealment. I therefore levelled the gun at this object, and pulled the trigger; there was an explosion, a flutter in the bush, and the bird dropped lifeless to the ground. Judge of my surprise when on picking it up I found it to be not the Sedge Warbler, but a Willow Warbler, (*Sylvia trochilus*.) I was for a moment fully impressed with the idea that I had shot a Willow Warbler in the act of singing the song of the Sedge Warbler; and this impression would no doubt have remained upon my mind, but that the notes were quickly resumed in another bush not far distant. The real facts of the case now forced themselves upon me;—the bird I had shot must have been in a direct line with, and immediately in front of, the bird I had heard singing, thus concealing it from my view; and as the front ranks in an engagement receive the first fire, and consequently afford protection to those in the rear, so this unfortunate Willow Warbler received the fire intended for the Sedge Warbler; thus preserving, for this time at least, its life.

Now there is just a possibility that such might have been the case with the Owl shot by Sir W. Jardine. The Barn Owl was the victim, but the real culprit might have escaped, and unobserved too, under cover of the smoke, in the person of the Tawny Owl, as they might have been sitting "cheek by jole" together, the body of the hooter covered and concealed from view by the body of the non-hooter; for a non-hooter I most firmly believe the Barn Owl to be; and did I constitute a jury, and were I called upon to

decide on a charge of hooting, brought against any individual of this species, I should be unanimous for a verdict of acquittal. I have lived many years in a district free from wood, where the Barn Owl is the only kind of Owl to be met with; now although this species is common and plentiful enough, the hooting of an Owl is never by any chance to be heard in this district; while in a well-wooded country, in which I have also resided, where the Tawny Owl abounds, the hooting of the Owl is almost as familiar a sound as the cooing of the Ring Dove, or the cawing of the Rook. This convinces me that it is at the door of the Tawny Owl the charge of hooting is principally to be laid, and that this principal "count in the indictment" must fall to the ground if preferred against the Barn Owl. A few minor "counts" might perhaps be sustained, such as screaming or screeching in a way calculated "to create a breach" in "the peace"ful slumbers, or even to "disturb the peace" of mind of certain of Her Majesty's loyal, but withal timid and superstitious subjects, and some others.

The Rook, (*Corvus frugilegus,*) has "an establishment" in some pine, oak, and beech trees at the rear of the house. These birds, as we naturally expect "members of temperance societies" to be, and there is no mistake as to their being evidently of this class, are of strictly regular habits; they have no relish for "keeping late hours," but a decided aversion thereto. "Early to bed, and early to rise" is one of their maxims, and though fond of society, as good fellows are, they, like *rational beings,* eschew "the bottle." The "crystal spring," the "limpid stream," or even the "stagnant pool," or wayside puddle supplies them with the only kind of beverage they indulge in, and this is the only kind of beverage they, or any other description of animals, really require; and happy would it be could none other be procured; happier still would it have been, had none other ever been invented or thought of.

There are some who maintain that the Rook does not breed until it is two years old: I know not what arguments are used in support of this opinion, but my reasons for believing that it does so at one year old are these:—It is well known that in each large district, embracing an area of many miles, there is a common roosting-place, to which all the Rooks in that district nightly resort the greater part of the year; that is, except during the breeding-season. As soon as the breeding-season has fairly set in, these roosting-places become quite deserted; the vast masses of birds, which resorted there, having broken up into separate communities, and become tenants, 'pro tempore,' of the various breeding-places—"rookeries"—which are scattered here and there over each district. Let us take the trouble of ascertaining the number of tenanted nests in any "rookery," and the number of birds that rookery contains, and we shall find there are just as many tenanted nests as pairs of birds; thus proving that all here are engaged in the task of rearing their young, or are preparing to do so. If, therefore, the young of the previous year are not to be found here, or at the common roosting-place,

where are they to be found? We never see, at least I have never seen, a colony of Rooks living throughout the spring and summer in a state of "single blessedness," which unquestionably would be the case if they did not breed till their second year, unless, indeed, they have institutions in which to retire, similar to those in which certain of our "fair ones" are wont to immure themselves; but as I have never heard of the existence of any such institutions amongst these sable inhabitants of the rookery, I can come to no other conclusion than that the young of the previous year are to be found similarly engaged with those of more mature age.

The eggs of this species are exceedingly variable in colour, in size, and in shape; light ash, dark green, or blue, with every intermediate shade, is displayed in the ground colour: blotches, spots, and specks, in an endless variety of colours, forms, and sizes, are scattered, now thickly, now sparingly, thereon; black, brown, grey, lavender, purple, and other colours, compose these spots. Now you meet with an egg rather rotund in shape; now one drawn out into the shape of a jargonelle pear; now one tapering at each end: here is one equalling in size that of the Carrion Crow; there, one as small as that of the Jackdaw. I have two remarkable varieties—the first, which was taken twelve years ago from a nest in this rookery, is less in diameter, but somewhat more elongated than that of the Blackbird, (*Merula vulgaris*,)—ground colour, greenish ash, mottled all over with yellowish brown and bluish ash; it is probably a sort of abortion, similar to those we sometimes find produced by domestic fowls. The other is of medium size, and there is nothing extraordinary in its shape, but in the distribution of its colours there is something "very peculiar." A zone of plain dull oil green surrounds the middle, which fades gradually away on either hand to a leaden hue, this lead colour entirely pervades the larger end; there is a total absence of spots or specks, but the whole of the smaller end is concealed beneath a black cap, whose edges are extremely regular and well-defined. This cap, which is of intense blackness, gives it an appearance as strange, though certainly not so appalling, as that of My Lord Chief Justice or Chief Baron, when they "put on" that horrible head gear. It is not my intention to write a history of this or any of the birds I shall have occasion to bring before the reader's notice in these papers; to do so, would be to eke them out to a length exceeding all bounds, I must therefore confine myself to the few remarks I have already made upon this species. I might have written a few lines in advocacy of its cause with the agriculturist; this however I am happy to find has already been ably done by J. Mc'Intosh, Esq., a gentleman who writes like one practically acquainted with his subject.—See his "Notes on the Rook," in vol. ii. of "The Naturalist."

(*To be continued.*)

Brighthampton, October 27th., 1853.

LOCAL JOTTINGS.—No. 11.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

Instinct of Birds.—Among the many interesting anecdotes of Instinct recorded by others and myself, I remember none more singular than the following:—A friend of mine, a Clergyman, was walking with the boys of his school near this town, when a boy threw a stick or a stone at three birds, which were flying out of a hedge, and struck one of them. The wing of the bird was broken, or otherwise so hurt as to impede flight. The bird, a Sparrow it is believed, would have fallen to the ground, had not the others supported him. They actually went one on each side, and with outspread wings, carried the injured bird between them to a hedge some little distance off. This was seen by many witnesses, and it strikes me as worth a "Jotting."

Fungus.—I am indebted to the same friend for the following singular anecdote:—A person, a short time since, was gathering mushrooms, when he observed a fungus, called in this neighbourhood "a toadstool," of singular appearance; and on going up to it, he saw that it had grown up in the centre of a small gold ring, and lifted the ring up with it. The ring must have been dropped by some person, and most extraordinarily the fungus must have risen exactly in the centre.

A Hint to Naturalists.—I can scarcely say how much I was gratified by the perusal of an article at page 275 of vol. iii. of "The Naturalist," headed as above, and written by T. G. B. Atkinson, Esq. I think *he* deserves great credit for having written it, and *you* for having inserted it in your most useful and entertaining periodical; and I trust the "hint" will not fall useless to the ground. I am sure I have often felt the same sensations, and have frequently hesitated about "speaking out" on the subject, but a foolish dread of being thought "squeamish" has hitherto kept me silent. Another reason why I feared mentioning the subject was, that the "Tu quoquè" applied to myself in a slight degree, as I am bound to plead guilty to occasional captures of specimens of Entomology for my own collection. I cannot, however, help thinking that it is much to be regretted that so many more are killed by collectors than can be of use, except for the purpose of exchange. Even then the cool confessions of many collectors of having taken the unfortunate animals in such large numbers, and the cruel experiments tried on them, etc., damp the pleasure of perusing many, in other respects, interesting articles in the different magazines devoted to science. In all kindness, therefore, to my brother naturalists, I will point out one or two cases in which, although I know the "heads and hearts" of the writers are right in every sense of the word, the above circumstances mar, to a certain extent, the gratification the perusal of their works would have otherwise afforded.

I allude first to a valuable contribution, called a "Note on the supposed

late appearance of Insects," in the "Zoologist," page 4129, in which the author states of the *Pamphila Actæon* these words:—"I did not procure anything like the number of specimens that might have been obtained in fine bright weather, although what I did get (nine dozen) were in much finer condition than they would have been if the sun had shone continuously." etc.

Imagine! nine dozen, (one hundred and eight specimens,) inter alia, of one poor insect! The other instance to which I allude, is the work, lately published, of "A Naturalist's Rambles on the Devonshire Coast," by P. H. Gosse, Esq. This book is, as all must admit, a most important addition to a very little known branch of Natural History, most pleasingly written, and that by a true lover of Nature and her works; but I am sorry to say that the pleasure here is again lessened by the description of the various experiments performed on the beautiful animals so well and minutely described therein. It is the only drawback to a most delightful work.

The comments of that healthy-toned contemporary, "Kidd's Own Journal," in a Review of "The Naturalist," vol. iv., page 283, amply also bear me out.

I hope, therefore, that it is only necessary to have the evil fully pointed out, for these and other wholesale slaughters to cease amongst collectors.

Dorchester, December 5th., 1853.

NOTES ON THE DODO.

BY "MUS."

In the December number of "The Naturalist," mention was made, in the obituary notice of Mr. Strickland, of the work entitled "The Dodo and its kindred; or the History, Affinities, and Osteology of the Dodo, Solitaire, and other extinct birds of the Islands of Mauritius, Rodriguez, and Bourbon," (Published by Reeve, Benham, and Reeve, King William Street, Strand;) the joint production of that lamented gentleman and Dr. Melville. Having by me some notes extracted from that book, and thinking they might interest such of your readers as have not seen the work, I send them to you to act with as you may think fit. Notes so short as these can of course only give a faint idea of the interest of the work, and of the curious and learned researches which it contains. Of the various kinds of evidence adduced in proof of the existence of the Dodo, the *Historical evidences* will, I think, be considered the most important; and to these I shall confine myself.

I.—Nothing definite is recorded of Mauritius and its productions, till the year 1598, when the Dutch, under Jacob Cornelius Neck, or Van Neck, took possession of the island, having found it uninhabited. Accounts of this voyage were written in French, German, Latin, and English, and published in 1601; the title of the French edition is, "Le second Livre, Journal ou Comptoir, contenant le vrai Discours et Narration historique du voyage faict par des huict Navires d'Amsterdam au mois de Mars l'an 1598, soubs le conduitte

de l'Admiral Jaques Corneille Necq, et du Vice-Admiral Wibrant de Warwicq." Published in folio at Amsterdam, by Corneille Nicolas; a copy is preserved in the Radcliffe Library, *adorned with curious engravings on wood.* Of these, Plate II contains figures of the various productions of the island, amongst which we find a Dodo rudely drawn: the accompanying description of the plate says of this bird that it is "called by us *Walck-vogel*, the size of a Swan. The rump is round, covered with two or three curled feathers; they have no wings, but in place of them three or four black feathers..... We cooked this bird, which was so tough that we could not boil it sufficiently, but eat it half raw." Well therefore might they call it Walckvogel (disgusting bird,) having by them also an ample supply of Turtle-Doves.

II.—The account of a voyage of Jacob Van Heemskirk, in 1601: he stayed in the island of Mauritius nearly three months, and mentions Wallichvogels as found there among other game.

III.—Willem Van West-Zanen, in 1602, stayed a considerable time at Mauritius, and in his Journal, (published Amsterdam, 1648,) makes repeated mention of Dod-aarsen, called, he says, by others 'Dronten,' And he writes —"When Jacob Van Neck was here, these birds were called Wallichvogels. .....They have great heads, with hoods thereon; they are without wings or tail, and have only little winglets at their sides, and four or five feathers behind more elevated than the rest." Two of them, he says, more than dined the whole crew.

IV.—Clusius, in his work "Exotica," says that in the year 1605, he saw in the house of Professor Panwins, at Leyden, a Dodo's leg, of which he gives an accurate anatomical description, with measurements.

V.—Cornelius Matelief, a Dutch Admiral, arrived at Mauritius in 1606, and, after alluding in his journal, to the abundance of birds on the island, he proceeds:—"On y trouve encore un certain oiseau, que quelques-uns nomment Dodaise, ou Dodaeisen: d'autres lui donnent le nom de Droule. Les premiers qui vinsent cr cette isle le nommerent Oiseau de degoût," etc.—giving similar description to the one above.

VI.—Two ships, under the command of Van der Hagen, in 1607, remained some weeks in Mauritius, and the crews feasted on abundance of "tortoises, *dodars*, pigeons, turtles, etc."

VII.—P. W. Verhuffen touched at Mauritius in 1611, and mentions Dodos under the name of Totersten. His men killed several, but were obliged to be cautious, on account of their powerful beaks. He describes them in nearly the same terms as Van Neck.

VIII.—Van der Broecke visited Mauritius, (April 19th.—May 23rd.,) in 1617;—in the account of his voyages, is a plate containing the figure of a bird which must be a Dodo.

IX.—Sir Thomas Herbert, in 1627, visited Mauritius, and found it still uninhabited. In his travels he describes and figures the Dodo: he derives the name from the Portuguese 'doudo,'—stupid; but this wants confirmation.

X.—Francois Cauche, in an account of his voyage, made in 1638, says that he saw in Mauritius birds called *Oiseaux de Nazaret*, the description of which pretty well answers to the Dodo, though apparently made from memory. He says the egg was about the size of a half-penny roll.

XI. Sir H. Lestrange relates that about 1638, a *live Dodo* was exhibited in London, which he saw and describes as being "bigger than the largest Turkey-cock."*

XII.—A specimen of 'a Dodar' is enumerated in Tradescant's Catalogue of his Collection of rarities, 1656. The head and foot of this specimen are preserved in the Ashmolean Museum, at Oxford.

XIII.—A Dodo's leg, mentioned in a Catalogue of Rarities at the Music House, St. Paul's Churchyard, 1665: now in the British Museum.

XIV.—A Dodo's head at Copenhagen, (catalogued 1666,) still exists at that place.

XV.—The last mention of the Dodo is in July 1681, when the ship Berkeley Castle put into the Mauritius, and the crew partook of Dodo's flesh, "which," says Benjamin Harvy, (chief mate,) "is very hard."

EXTRACTS FROM MY DIARY ON THE NIGHTJAR, OR, FERN OWL, *(CAPRIMULGUS EUROPŒUS.)*

BY GEORGE R. TWINN, ESQ.

On Saturday Evening, May 7th., at twenty minutes before nine, I heard a wild but subdued screaming noise, unlike that of the Owls. The twilight was getting very heavy, so that from my window I could not discern the birds well; they continued flying round the bottom of our fields and those adjoining, for nearly ten minutes. The cry was very wild, and not that of *sorrow*, so it did not appear to me to proceed from Blackbirds that had been startled and plundered; moreover the time was very unsuited for such an event; and the nest of young Blackbirds was safe next morning, in our field. It occurred to me, that it might proceed from the Nightjar; but I have no authority for my supposition, as for upwards of ten years I have never met with a specimen in our village. The screams were very expressive of calls, and appeared the mutual sounds of two birds actuated by familiarity. I could just trace the dusky flight of them. The following evening I watched but heard no repetition.—May 9th., 1853.

As I have been seated by my window, reading or musing in the twilight, between half-past eight and nine in the evening, I have several times, during the past week, been very much amused with certain cries, from a pair of birds, that I concluded were scouring the adjacent fields for moths and insects: the cry of one was powerful—of a harsh 'craking' noise;

* In a note, a copy of the "*Dodo Book*" is promised to any one who shall discover another contemporary notice of this exhibition.

the other weak, and merely a succession of "chucks." Last evening I heard them for nearly a quarter of an hour; I saw them skim from a barley field over the end of our orchard. They were not a very large bird, and flew but seldom higher than the hedge, which was rather more than six feet high. I have early in the morning searched for them, but as yet they are unknown to me; for I believe the Nightjar makes his appearance in the morning twilight as well as in the evening. The regularity of their turning out for food convinces me they are birds of a very retired nature, for in the day they are not seen nor heard by me, though I have endeavoured to trace them.—May 19th., 1853.

I am fully certified now, that the evening cries I have previously noted, are those of the Nightjar. I have several times seen them skimming over the field even after nine o'clock; and several who have heard them, assure me I am correct. I only wanted to discover a nest, or to have a bird brought me; and in this I had hitherto failed. But on the evening of June 8th., as a gentleman, rather late, after an evening's amusement in rat-shooting, was about to fire his gun for replacing it, unloaded, in the house; he fired at a bird suddenly darting by, and instantly brought it to the ground, but unfortunately minus its tail. It was a fine specimen, otherwise, of the Nightjar, in full plumage; and in the opinion of the person who shot it, was winging its way from Bawburgh Hangings (or Hanger;) a spot from its very cool and retired sheltering foliage, peculiarly adapted as the retreat of such a bird. I have searched for a nest, but have failed in securing such a desired specimen. The gentleman who brought it down, has known for many years this bird to abound in the neighbourhood of Webbourne, in Norfolk. Though I am not certified as to these birds coming from our Hangings to our Hill, a distance in a direct line of a lengthy mile; yet I am sure that in our village the Nightjar has a home, and may be classed among our visitants henceforth.

I scarcely fail any evening hearing and seeing them, as they skim round the fields, seldom rising higher than the hedges, gathering Moths and other nocturnal insects. It is a shy, close, retired, bird; very rapid on the wing, and from its cry and action of toying, now high as the hedge, now on the surface of the field, then circling round its mate; I conclude it is a very affectionate bird.—June 10th., 1853.

On Saturday morning, June 18th., (the first aniversary of Waterloo, since the decease of the honoured Duke,) I was obliged, from necessary preparations to be made for my taking that day a long journey by rail, to be up early. Having retired with this impression, I necessarily had a rather restless night, and was awake at a very early hour, for at twenty minutes before two, I heard very beautifully, as I threw open my window, the glad music of the skylark, offering to its great Preserver a rich tribute of thanks; whilst busy and listening to the Lark, the long desired evidence was mine, relative to the Nightjar. I heard its cry, and saw the playful flight of a pair of these birds,

as they swept the surface of G. C's field, and seldom rising higher than the hedge, appeared diligently securing all the Moths and Beetles then abroad, or at rest on the leaves. At three o'clock they were rising with a gentle sweep up and down, more apparently for pastime than for plunder, and at last, in the full enjoyment of their morning excursion, past over into our orchard, and took the insects from the top boughs: a very short stay, and off they went round the hedge-rows of G. C's field once more, and finally into the one adjoining, and I lost then all trace. They were of a fine mottled brown plumage, very bright; and during the time I had the best opportunity of observing them, they seemed to carry their necks, naturally rather short, distended to a somewhat greater length than you reasonably could imagine in a horizontal posture. I have no doubt whatever, now, in placing the Nightjar among the birds that visit Bawburgh, and I naturally conclude their retreat is our Hangings, the only probable spot.—June 20th., 1853.

Having been unsuccessful in meeting with any nest of this bird, and not having discovered any of its eggs in the nest of another bird, as it is supposed by some Naturalists, to follow the Cuckoo's practice, I must here conclude my remarks, and hope, if spared, to be more fortunate next season. I have been led to make these notes from the duty incumbent on all, to arrive at just conclusions relative to any disputed matter, and also to show how perseverance and close observation may be rewarded. Should these draw forth other remarks from any of the readers of "The Naturalist," to aid in producing true evidence, my object will be more than realized.

Bawburgh Hill, September 1st., 1853.

AN ENTOMOLOGIST'S EXCURSION TO EBBOR ROCKS.

BY MR. MICHAEL WESTCOTT.

What a fund of pleasure does a country ramble create for him who is a lover of nature; and especially if he delight in the study of Natural History. But to him who has to labour mentally or physically for his sustenance, a rural retreat is doubly pleasing because he can enjoy the harmony of the groves, or view the golden-studded fields, only at such times as he can spare from his vocation. This I know from experience, and had it realized on the 20th. day of August, as I wended my way along lover's walk, intent upon an excursion to Ebbor Rocks. But although to ascertain the local range of insects, and to collect specimens of them was my object, yet I could not refrain from noticing every subject of Natural History which came under my observation. And whatever I saw in my rambles which gave me more than ordinary pleasure in seeing, I thought might likewise interest some of the readers of "The Naturalist" consequently I give them a place in these notes.

The day was in every way suited to my purpose. In the hedge, and in the

field, the spider was traversing his dew-decked web, and the Lark was carolling in the cloudless sky; and I felt as happy as they, in having a day to myself, to walk hand-in-hand with nature, viewing and admiring the variety of the Almighty's beautiful works.

I saw nothing worthy of note until I arrived on Milton Hill. This is indeed a delightful spot, and a favourite walk of the inhabitants in the summer; not only on account of the picturesque beauties it possesses in itself, but likewise on account of the grand prospects visible for twenty miles around. As I was watching a multitude of Ichneumons and other small insects flitting about a furze bush, an Oak Egger Moth, (*Lasiocampa Quercus,*) made his appearance; but so quick and varied were his evolutions, that I had not the slightest chance to net him. However, having a fancy for the blooming furze, he alighted at the base, and hurrying through the long grass, he found his "lady love." He was so delighted with the discovery as to lose his playful wildness, and allow himself and partner to be taken.

In a few minutes after this capture, I beheld on the wing for the first time, a Clouded Yellow Butterfly, (*Colias Edusa,*) a very rare visitor in our neighbourhood; and after a good run, and many attempts, I succeeded in capturing him. I was now by the lime-kiln, which stands in a very romantic spot. It is now in disuse, and nearly overgrown with nut-bushes, young oaks, pollards, etc. The quarry which supplied it with stones, is situated close behind it, in the midst of an oak wood. The rocks are steep and slippery, and are here and there adorned with brushwood, honeysuckles, foxglove, and a variety of other plants. Here I took one specimen of the Large Tortoise-shell B., (*Vanessa polychloros,*) and two Rock-eyed Underwings, (*Hipparchia Semele;*) both of these species are uncommon. I climbed the rocks and threaded a narrow path, which is hid by the drooping limbs of oaks, at the left of the kiln, and came to an agreeable spot called Milton-hill-hore. Many persons who have visited Milton Hill, have never been to this pretty secluded place. It forms a portion of the wood, and not being accessible to cattle, it revels in its natural wildness, bearing a variety of botanical subjects which I have never seen in any other place. The moss is grown over it so thickly, that when you are walking on it, you fancy yourself treading on so much down.

I have gathered cowslips here of a gigantic size, bearing as many as eighty petals on one stem, and the stem more than an inch in circumference. It is surrounded by blackthorn bushes, and when they are in bloom they cannot help enhancing the delight of every observer.

There are many ways leading to Ebbor Rocks from here, but on this occasion I chose to go down the hill in a north-eastern direction, crossed an old sheep-pond, thence along a narrow lane, which brought me to lower Milton. On my way thither I saw two Ring Ouzels, (*Turdus torquatus;*) these birds are rare; but a keeper told me that he knew a tree where a pair built several years in succession. I took five caterpillars of the Privet

Hawk Moth, (*Sphinx Ligustri,*) feeding on some lilac, and a few yards from the same spot, I found two full-grown larvæ of the Goat Moth, (*Cossus ligniperda.*) There is a footpath leading from Lower Milton to Wookey-Hole, a pretty little village, noted for its cavern, from which issues a fine stream of water which drives several grist and paper mills. As I was going to Wookey-Hole, I heard some Magpies chattering, and saw three or four flying round a spot in a corner of the field; their excessive noise and active movements indicating their having something more than common to engage their attention. After watching them for some minutes, for I felt quite amused to see them, and particularly one bird, which seemed to be a young one—it would dart down on the ground, and as quickly ascend, perch in a holly tree, and again ascend; all this he would do in less time than I can write it. I approached the spot very cautiously, and the birds redoubled their chattering at my intrusion. But guess my horror in finding the object of all this bustle and clamour was a poor unfortunate sheep laid down in a hollow, and unable to get up. The Magpies, taking advantage of her helpless position, attacked her, and actually *plucked out both her eyes.* It was a pitiful scene—a scene I never wish again to witness. I assisted the poor creature on her legs, but she could not stand. I could see she had been there some time: she was quite powerless on that side on which she lay. I remained with her until I saw a farmer's man, to whom I gave her in charge. I declared vengeance against the predatory chattering rogues, who still looked me in the face from a neighbouring tree; and if I could find them in the same predicament as they found their victim, their lives should pay the forfeit.

On my way to Wookey-Hole I took the Holly Blue, (*Polyommatus Argiolus,*) Little Blue, (*P. alsus,*) Common Blue, (*P. alexis,*) and Brown Argus Blue, (*P. agestis.*) The foregoing Butterflies, with the exception of the Holly Blue, are plentifully distributed about our neighbourhood. When I got to Wookey-Hole, I went in through the gateway at the east side of the paper mill, and walked along by the river till I reached the overhanging rocks whence the water issues. These rocks form a natural arch about thirty feet high, forty broad, and sixty long, covering a beautiful sheet of crystal water. As you gaze on these rocks, the cavern's mouth stands on the left; the entrance to the cavern is narrow, but soon opens into a spacious vault eighty feet in height. The whole roof and sides are incrusted with sparry concretions of curious forms, and present a grand appearance to the spectator, when accommodated with a good light, through this dark subterraneous passage. These rocks are favourite building-places of numerous Jackdaws, and they not only build in the chinks of the rocks, but in forsaken rabbit-holes around the surface edges; and likewise in many of the hollow trees. About five years ago, when rambling about these huge piles, I heard a noise close to me resembling the loud breathing of one asleep. After searching some time, I found it proceeded from a hole under a tree

hanging over the cliff. Having secured a firm footing, I put my arm in, and pulled out a young Jackdaw, which occasioned the strange sound. The poor bird was in a pitiful condition; it was swollen to an enormous size by the admission of air between the flesh and the skin; indeed it was so large that I could not put it into my hat. There were three others in the nest, and although they were fine birds—about a fortnight old, yet they looked like pigmies by the side of their monster companion. I punctured the skin in several places, which caused it to collapse, and then the creature breathed with more ease. But the air readily swelled the skin again, and then the windy subject resumed his old habit of breathing. About three weeks afterwards, I found it dead in the nest; in all probability he was starved—not being able to follow his fledged companions, he was forgotten by his parents.

I now went up through the hazel coppices on the left of the cavern, and pursued my way across some four or five fields, but found nothing worthy of notice, save a very large Toad, which I discovered in a low thick-set bush; I was led to the discovery by seeing a small hole in the long grass which was interwoven in the bush. The inhabitant had made this his dwelling for some time, as the interior of his establishment was very smooth, and as comfortable as a Wren's nest, which it very much resembled.

I was now on Ebbor Rocks. The first interesting object that met my gaze, was a circle of scarlet fungi, about sixty yards in circumference; and so perfect was the ring, that they were not more than a foot apart; they presented a magnificent spectacle as the sun shone on their glossy velvet-like skin. The Gray and Golden Plovers frequently build about this part of the hill. In the course of my rambles here this season, I took some of all our known species of British Skippers; and, might as well observe, that I have seen most of them in other places about this locality; but the most rare is the Lulworth Skipper, (*Pamphila Actæon.*) The most picturesque parts of this hill, are observable on traversing the valley, which forms a boundary of Sir C. Taylor, Bart., and R. C. Tudway, Esq., M. P's property. There are, in this valley, a thousand various objects on either side:—high rocks are standing like pyramids decorated with moss, ferns, and ivy; while underneath are shrubs, and trees, and flowers. In the highest rock, called the "Giant's Cave," a pair of Ravens have built for many years; as have also the Kestrel, the Sparrow-hawk, and Goshawk; and I have no doubt but they are imitated by the Peregrine-Falcon, as I have seen them on several occasions, quivering and making the hills echo to their shrill note. I observed some specimens of shells—*Cyclostoma* round the limbs of trees, *Limax pellucida* and *Bulimus lubricus* under rubbish, and in the chinks of rocks. I saw no less than eighteen blind worms, and nine Ringed Snakes to-day; I caught one of the latter—a very fine one; it measured three feet. As I had it in my hand, a farm-labourer came by and was wonder-struck to see me *handling a snake!* He asked me if I had not "hut his back off, and pulled out his stinger?" On replying in the negative, he looked

upon me as a necromancer, for, as he said, he never saw any one handle a Snake before. I assured him that there was no venom attached to them whatever; to prove which, I took hold of its long livid tongue, *alias* "stinger," with my finger and thumb, and afterwards put its head to my face; and by so doing, I believe my astonished beholder became a proselyte in kindness towards this beautiful ill-treated reptile.

Forget-me-nots, (*Myosotis palustris,*) Common Marjoram, and a variety of St. John's Wort plants are common about this hill, but more especially along the banks of a little stream that runs through a beech wood at the south end. There were numerous species of the Common *Physa fintinabis,* transporting themselves along, adhering to the surface of the water, with the shells downwards. Several Golden-crests, (*Regulus auricapillus,*) were flitting from twig to twig in search of insects, singing their sweet little song as they fled. I observed here likewise, three Great Spotted Woodpeckers, (*Picus major,*) several Sand Martins, (*Hirundo riparia,*) and a Water Ouzel, (*Cinclus aquaticus.*) About half-way down this stream, the water is dammed in for some purpose, and is about three feet deep. I sat down on the bank to have some refreshment, and to watch the manœuvres of the Water Boatmen, (*Notonecta,*) and other aquatic insects. I perceived a Water Rat, (*Arvicola amphibius,*) on some weeds, who was, like myself, enjoying a repast. When I turned my head to ascertain on what he was feasting, he made a start, but did not disappear; and on seeing me again motionless, he felt no alarm, as was shown by his sitting up and washing his face. I never miss an opportunity of watching the movements, and knowing more of the habits, of this singular animal.

This little fellow performed many tricks which I never saw acted by any of his family: it was indeed pleasing to see him dive and run along on the bottom of the water in search of food, which consisted of roots and stems of aquatic plants. There was one root for which he had a greater relish than the rest; he made several unsuccessful attempts to bring it up, and on one of these occasions, he remained quite a minute under water. By this time, another Rat made its appearance, which the other seemed not to notice; however they soon came in contact, and a friendly understanding commenced therewith. The first Rat being much smaller than the second, I concluded was a male, as diminutiveness of size is the characteristic distinction of the male sex. The small Rat began licking the face and ears of his companion, which she seemed to like very much, for when one side was well 'licked,' she turned the other to be dealt with in like manner. This performance, which lasted about five minutes, being done, the small Rat approached the spot where his favourite root lay under water, which he had not yet pronounced as 'sour;' he was followed by the large Rat; and now a mutual understanding seemed to exist between them; for as soon as the little one dived, and began tugging at the root, he was joined by the other; and by their united exertions, they bore the prize to the surface, and com-

menced feasting upon it with the avidity characteristic of their species. The root was but small, and of course soon disappeared. Their hunger being not yet satisfied, they ran along the edge of the bank, diving and swimming alternately, in search of more food, as was proved by one of them seizing a dead frog, lying among the rubbish; and while in the act of eating it, both Rats disappeared in an instant. As I was wondering what could have frightened them, a very large Snake caught my eye, noiselessly wending his way down the stream; and when he came to the deep water, he seemed in ecstacies; so gracefully did he move, or rather swim, and so nimble and varied were his manœuvres in the liquid element, that it surpassed anything of the kind I ever before witnessed; and he felt as much pleasure in diving as he did in swimming, for he disappeared several times under water; and at last he went under and remained so long, that I lost him altogether. I have not the least doubt but when he dived, he was in search of thornbacks or minnows, which are plentiful in this little stream.

From this spot I started homeward through the coppice; just before I came to the farm-yard belonging to Mr. Hill, I saw a Stoat, (*Mustela erminea*,) pushing an egg across the lane; when he observed me approaching, he used all his efforts to secure his prize, but owing to the largeness of the egg, or the smoothness of the shell, he could not succeed; I looked into the ditch where the Stoat came out from, but could see no sign of either nest or eggs. A short distance from this yard stands Wookey-Hole House, the residence of Robert Davis, Esq., whose talented lady has succeeded in forming a beautiful shrubbery and flower-garden, which display her skill as an horticulturist, as much as her works do her literary attainments.

It was now about four o'clock, and although the pride of the day was past, yet the flies, bees, and wasps, were in abundance in and around the garden. On my way home over Milton Hill, a pleasant walk, which most people in the neighbourhood are aware of, I took the following moths and caterpillars. Pink Underwing, (*Calomorpha Jacobææ*,) Double O, (*Cymatophora Oo*,) Orange Underwing, (*Brepha Parthenias*,) Clouded Buff, (*Euthemonia Russula*,) Vapourer, (*Orgyia Antiqua*,) Pebble Prominent, (*Notodonta Ziczac*,) Swallow-tail, (*Ourapteryx Sambucaria*,) Lunar Thorn, *Geometra lunaria*,) Mottled Umber, (*Hibernia defalaria*,) Green Brindled Crescent, (*Miselia Oryacanthæ*,) Large Holly, (*Sarrothripus Ilicanus*,) and several other moths, the names of which shall appear at some future period.

St. Cuthbert's Place, Wells, December 8th., 1853.

ON TWO NEW BRITISH MARINE ALGÆ.

BY BEVERLEY R. MORRIS, ESQ., M.D.

Desmarestia pinnatinervia.

In our November number, we announced on the cover, that Mr. W. Sawers, of Londonderry, had discovered a new Marine Alga, believed to be a *Laminaria*. Mr. Sawers communicated specimens to various distinguished Algologists, and also to the late Meeting of the British Association, but without throwing much light upon it, except in determining that it was new to Britain. Mr. Sawers obtained his "specimens in August last, after high winds, floating in Lough Foyle, at Moville, county Donegal, in the north of Ireland." Mr. S. not being able to obtain any authority for a previous name to this very interesting plant, called it provisionally, *Neurophyllum Morrisonii*, after an intimate friend of his—Mr. Charles Morrison. We regret, however, that, at present, this name would seem to fall to the ground; for specimens having been forwarded to our friend the Rev. Dr. Landsborough, he transmitted a specimen to Dr. Montagne, who pronounced it to be *Desmarestia pinnatinervia*. In a letter just received from Dr. Landsborough, he gives the following account of his proceedings in this matter:—

"In the summer of 1853, a sea-weed was sent to me by Mr. Sawers, which he had found in Lough Foyle, not far from Londonderry. It was unknown to me; neither was it known to some distinguished Algologists, to whom I shewed it. Mr. Sawers, therefore, sent it to be exhibited at the Meeting of the British Association at Hull;—but it returned unnamed..

In the month of September, 1853, he found in the same locality several specimens in better state, and he sent some of them to me. I had been introduced, when I was in Paris, in 1851, to the celebrated Dr. Montagne, Member of the Institute of France, and to him therefore I sent a specimen, and very soon I had the pleasure of receiving a letter from him, saying that he discovered it in 1823, at St. Sebastian, in Spain, and had published a description of it, with a plate, giving it the name of *Desmarestia pinnatinervia*. He says that it had also been found at Brest, and mentioned by M. M. Crouan, as a variety of *Desmarestia Dresnayi*, Lam. "Mais je maintiens," adds Dr. Montagne, "la légitimité de mon espece."

It bears some resemblance to a *Laminaria*, or rather to an *Alaria*, as it has a midrib. It is an interesting plant, and I congratulate Mr. Sawers on this fine addition to the Marine Flora of Ireland."

Mr. Sawers thus describes it:—"Root, a disk; frond, simple; one or more from the same disk—six-twelve inches long, one and a half-two inches broad, with a short stem; colour, olive green. Delicately membranaceous, with a fine midrib, and still finer lateral nervelets opposite. Somewhat resembling delicate fronds of *Laminaria phyllitis*, with the addition of the midrib, and lateral nervelets."

Mr. Sawers further remarks that "the exploration of Loughs Foyle and Swilly, in the north of Ireland, is adding new localities for a number of the rarer Algæ. Of those already obtained, there may be enumerated *Taonia atomaria, Haliseris polypodioides, Stilophora rhyzodes, Arthrocladia villosa, Sporochnus pedunculatus, Bonnemaisonia asparagoides, Ginnania furcellata, Gloiosiphonia capillaris, Gigartina acicularis, Kalymenia Dubyi, K. reniformis.*"

Having received from Mr. Sawers some very important additions to our collection of Marine Algæ, besides specimens of the new Sea-weed, we were struck with the number of, hitherto, southern species among them. We trust that the zealous labours of two such ardent Algologists as Messrs. Sawers, and C. Morrison, may yet bring out new localities for many of our rare Algæ, for the growth of which the sheltered Loughs of the north of Ireland would appear to offer many facilities. The subject of this notice, to our eye, looks very unlike any *Desmarestia* with which we are acquainted, and we should much rejoice were Mr. Sawers' designation yet applied to it.

Striaria fragilis.

We have to announce the occurrence in Scotland of another southern species, also new to Britain; and Dr. Landsborough has kindly favoured us with the following notice of it. *Striaria attenuata* is the only other British species, and that we believe has only occurred on the north and south coasts of Devon and Cornwall, and on the coasts of Connemara:—

"It is encouraging to learn that Algæ are from time to time occurring that had not previously been known as British. *Striaria fragilis* is one of these. It was dredged in Lamlash Bay, Isle of Arran, in August, 1853. The party consisted of Professor Walker Arnott; the Rev. Mr. Miles, of Glasgow; Mr. Campbell, of Glasgow; and myself. A considerable quantity of it came up in the dredge, but little of it was secured, as it did not strike us as new. Professor W. Arnott was not in the boat at the time, but when it was shewn to him, he ascertained that it was *Striaria fragilis*, having a named specimen, which he had received from M. J. Aghard. When I returned home, I found that I had a good specimen, which I had dredged in the same locality in the summer of 1851. It bears some resemblance to an overgrown specimen of *Stilophora Lyngbyæi*, dredged along with it. On learning that it was new to Britain, the same party went back about a month afterwards to lay in a store, but we got not a specimen worth preserving. I am sure, however, that it is abundant in that locality."

We congratulate not only the discoverers of these new species, but also Algologists in general, that they have fallen into liberal hands; they will not be hoarded up, but put out, we trust, to good interest; for liberality in the exchange of specimens cannot fail to induce a corresponding feeling in the recipients; both our friends deserve largely in this respect.

Miscellaneous Notices.

A large Ermine, (Mustela Erminea.)—There was shot a few days ago by Alexander Rannie, Esq., Boyndie, near Banff, an Ermine, which measured nineteen inches in length; it is a very pretty animal, having nearly attained its full winter garb—that of a beautiful snowy white, except a stripe of brown, the only remaining rag of its summer dress, which runs down its back. The tail of course has the usual black and bushy tip. The length of the longest which I ever remember having met with, was fifteen inches, and it was considered no trifle. I am happy in being able to add that Mr. Rannie has preserved his specimen.—T. Edward, Banff, December 26th., 1853.

Occurrence of the European Crossbill, (Loxia curvirostra,) *at Craigston, Aberdeenshire, the seat of Pollok Urquhart, Esq.*—Six of these birds, three males and three females, were brought me to-day, having been procured by Mr. Morison, gamekeeper at the above-named place, on the day previous. They were entirely unknown to the people of the district, and were in consequence denominated foreigners.—Idem.

Ornithological Notes.—There was shot about a fortnight ago, by H. Rannie, Esq., Boyndie, in a dam near his house, a very fine Widgeon, (*Mareca Penelope.*) It is somewhat strange to hear sportsmen and gamekeepers, individuals who should know better, denominating, almost without distinction, every species of Duck, the Mallard excepted, which falls to their lot in this quarter by the term of Widgeon or Teal. Now the fact is, that the Widgeon is one of our rarest Ducks, being very seldom met with here. The specimen in question has been preserved by Mr. Rannie, and is in his possession. There was likewise killed by the same gentleman in the beginning of last week, in one of his turnip-fields at Boyndie, a rather strange variety of the Red or Black-headed Bunting, (*Emberiza Schaniclus.*) Its peculiar and piebald appearance whilst hopping about, being beautifully mottled with white and reddish brown, was very remarkable, and had the effect of drawing Mr. Rannie's attention towards it. It is a very fine, and, I may add, an interesting specimen of its kind. There was also, and about the same time as the above, a very beautiful specimen of the Barn Owl, (*Strix Flammea,*) killed on the estate of Durn, by G. Donaldson, Esq., of Glasgow, but who is at present residing at Boyndie. It is somewhat curious, but no more strange than true, that this, by far the most lovely in colouring of all our nocturnals, is the commonest species in England, whilst with us it is the rarest—their appearances in this quarter being indeed few and far between. It seems also to be rather a scarce bird with our neighbours on our west, at least I find it so mentioned in a list of the birds of Morayshire which is now lying before me. Mr. D. has preserved his specimen, and, as a matter of course, it will be added to his collection.—Idem, October 7th., 1853.

Occurrence of the Red-necked Phalarope, (Phalaropus hyperboreus,) *in Aberdeenshire.*—A very fine female specimen of the above species was shot at Fraserburgh, on the 27th. of last month, by John Gatherer, Esq., of H. M. Customs there, and who, by-the-by, is one of my best friends, not forgetting his fair partner in life, the amiable Mrs. Gatherer, that I meet with when I go a naturalizing down that way. It was observed, just before, and where it was shot, swimming about in a stagnant pool near to the light-house. The bird is now in my possession, having been very kindly forwarded to me by Mr. G., and in a note which accompanied it, my friend informs me that he observed it flying about his neighbourhood for several days previous to the one on which he obtained it. It is a very *small* and *slender* specimen; the bill also is *slender*, *longish*, and *much pointed*, and the *scallops* on the toes not *very broadly developed.*—Idem, November 7th., 1853.

Rare Birds near Scarbro'.—I was in company with a gentleman at Scarbro' last year, who had been busily engaged in picking up mounted specimens of the various sea birds found about Flamborough Head. His collection excelled in quantity, but not in quality; amongst the lot there was a fine specimen of the Whimbrel, (*Numenius phæopus,*) bought of an old woman near Filey, whose husband had shot it under Speeton cliffs; besides an indifferent specimen of the Oyster-catcher, (*Hæmatopus ostralegus,*) and two Purple Sandpipers, (*Tringa maritima,*) procured near Filey.—John Dixon, Leeds.

The Mallard, (Anas boschas.)—A nest of this shy bird was found by a lad amongst a clump of sedge near the Eccup reservoir; he took the eggs home, and out of curiosity they were set under a Domestic Duck, and in process of time all hatched. The young brood seemed to take very kindly to their homely foster-parent, and grew remarkably tame, which lasted until they were well fledged, when their natural wildness appeared to be slowly returning. The company of their domestic congeners was now too tame for them, and they generally kept to themselves, paying frequent visits to the not-far-distant reservoir, but always returning to the farm-yard; a sudden noise, or the presence of Dogs, etc., would start them up, and away they would go again for the still waters. This continued until one day a gun was discharged very near them, when one and all took to their wings and never afterwards returned. I believe that many attempts have been made to restrain the natural wildness of this beautiful bird, but I can hear of no instance where the experiment has been perfectly successful in reconciling it to domestic life. While writing this, the recollection of another curious circumstance comes fresh to my memory. During a visit to some friends at Wistow, many years ago, where perhaps my taste for Natural History was first developed, I was often amused with the eccentricities of an old Goose, who had seemingly forsaken his own kindred and formed a friendly alliance with a flock of Ducks, in the midst of which he was always to be found, either afloat or ashore, indeed any approach to his own tribe generally met with a rebuff; but he was of a peaceable turn—a sort of Quaker bird—and not the Goose to pick up a questionable quarrel, so these insults were never retaliated but by a goodly hiss. On inquiring into this strange friendship, I was given to understand that the venerable Goose had been hatched under a Duck, whose motherly kindness he still evidently cherished, in the fact of his sticking to the family group ever after, in the midst of which he probably still maintains a conspicuous place.—Idem.

The Cormorant.—The "fanqui" or foreigner in China may have seen, and the "kind reader" of modern phraseology may have read of, a small vessel trading up and down the "celestial waters," dignified by the name of a Duck-boat, so called from the hundreds of these birds they are stowed with, which forms the floating capital of a numerous class dwelling on the Chinese rivers. These Duck-merchants often combine the fisherman with their other avocations, and indeed it is absolutely necessary for this poverty-stricken race to turn their wits to the best advantage if they mean to honestly exist, so that we may expect to meet shrewd customers among them, who verify the old adage of "either fishing or mending the net," and in modern parlance "being up to a thing or two," one of which is training the Cormorant to fish, which it does with surprising dexterity and success. We may say if the Chinese can train this bird to such perfection, surely it can be done here; so thought a gentleman residing in this neighbourhood, whose name I do not feel at liberty to mention, who accordingly procured some young Cormorants from near Flamborough Head, and by diligent training, succeeded in domesticating and making them first-rate fishers. The birds are carried about in a sort of hutch, to some suitable pond or stream; a small strap is then fastened round the neck to prevent them swallowing their prey; thus prepared, they are turned adrift, and, if the water is sufficiently clear, may be seen beneath the surface chasing their prey with the rapidity of a dart, and they seldom fail in procuring large numbers of fine fish. One old gentleman was very glad to get them out of his favourite trout stream, for it seemed certain that if they were allowed a fair day's sport, the destruction of all the fish would have been the result.—Idem.

Note on the Autumnal Incubation of the Wood Pigeon, (Columba palumbus.)—About the latter end of September, as I was enjoying a leisurely stroll through a wood in the immediate vicinity of this place, my attention was attracted to one of the numerous spruce firs planted along the margin of the path, by the hurried flight from its centre of a Wood Pigeon; and upon intently regarding the point from which it issued, I faintly perceived through the thick branches the outline of one of those peculiar collections of sticks used as nests by this species. As it was not placed any very considerable distance above the surface of the ground, I climbed upon the lower branches of the tree, and looked into it with a view of examining its condition, when, to my surprise and astonishment, I found that the nest contained two eggs. In the course of my ornithological experience I have not met with the eggs of this species except during the earlier months of the season. Have any of your correspondents noticed a similar deviation in the period of incubation from the ordinary habit of this species?—J. Henry Davies, Thirsk, October 14th., 1853.

Capture of the Quail, (Coturnix vulgaris.)—An intimate friend of mine has in his collection a female specimen of this rare and lonely bird, that was caught in a snow-storm near Kighton, in this county, on the 6th. of February last; he kept it alive for some time, but finding it too much trouble, and considering it a 'rara avis,' he was induced to kill and stuff it. I can say they are very scarce in this county, also in my native county, Warwickshire; although I have been a field-ranger for the last twenty years, I never came across one of these birds. In the winter of 1849, Mr. White, of Newparkes, sent one to me to preserve for him that was shot on his farm, about a mile from here, but it is singular enough that in the above two instances they should occur at a time of the year which proves that they do occasionally remain with us the winter through.—William Bond, Frog Island, Leicester, September 15th., 1853.

Departure of the Swift, (Cypselus murarius,) *and Swallow*, (Hirundo rustica.)—The Swift has this year remained with us rather longer than usual—one was seen up to the 29th. of August; I remember some years ago seeing a pair on the 3rd. of September, the latest I have any record of. I have watched these birds about the time of their departure, and have found that, of all the Hirundines, the Swift makes its exit the most punctual and sudden; I have particularly remarked this some years when the weather has been most glorious and inviting to their stay, but no! their time is come, and off they go with unerring instinct. The Swallow is more protracted, diminishing daily by the middle, and in general finally by the end, of October, but on referring I find that I saw one as late as the 25th. of November, 1842. Three years ago, at the west end of this town, by the River Soar, there was an osier-bed, which afforded shelter, at this time of the year, to such vast quantities of these birds, that we called it the grand "depôt" for the county; I am certain they must come miles to roost in this "bed;" I have been out at all points round Leicester, and invariably found them making for this favourite spot. On fine evenings it was amusing to see how high and playfully they would fly along, but in stormy weather, low, direct, and rapid in their course; towards sunset they would pour in from all quarters, making the air ring with their twitter, and forming one immense body. After performing these aerial evolutions over their roosting-place till nearly dusk, they would begin to fall like a shower of stones, till all was hushed. I and a friend were once amongst them, and I was more astonished than ever to see such numbers—every available spot had its occupant; but now, to our mortification and regret, it is cut down, and it will take years to produce again such a shelter for these very interesting and useful creatures.—Idem.

Late Nesting of the Martin, (Hirundo urbica.)—While sitting near the window one afternoon about a fortnight ago, I was rather surprised to observe a House Martin very busily engaged in laying the foundation of a nest in a corner of the window; it proceeded very indefatigably for some time, but then, seeming to be seized with some sudden caprice, left the newly-begun nest altogether; the same thing took place in another window of the house. Is it not a singular circumstance for a bird of this species to commence building at such an advanced period of the season? The second brood being generally fully fledged before this time, it is certainly rather strange that the bird should have been engaged in constructing a nest so late in the year. I do not know if any of your numerous ornithological correspondents have ever observed the like circumstance.—John Doig, Surgeon, Torryburn, Fife, September 16th., 1853.

The Bernacle Goose, (Anser bernicla,) *at Redcar*.—A very fine specimen of the Bernacle Goose was shot on the 1st. instant, in Coatham Marsh. The person who killed it, says there were nine in the flock when he fired, but as only seven were seen the following day, he supposes another had fallen elsewhere. They have now disappeared from this locality. This Goose is rare in this part of the country, for I never saw it, or heard of its having been met with here before.—T. S. Rudd, Redcar, October 22nd., 1853.

Sclavonian Grebe, (Podiceps cornutus,) *at Redcar*.—A fine immature specimen of the Sclavonian Grebe was found this morning in a disabled state by the side of the Railway; supposed, in its flight, to have been in contact with the wire of the Electric Telegraph; for, on dissection, it was found to be much injured on the fore part of the breast. Two Short-eared Owls, (*Otus brachyotos*) were also found about the same time and place, having each a wing broken.—Idem.

Wood Sandpiper, (Totanus glarcola,) *breeding near Newcastle*.—A nest of the Wood Sandpiper, a bird which has hitherto not been known to breed in Great Britain, was found at Prestwick

Carr, near Newcastle-on-Tyne, early in June, by Mr. John Hancock, of that city. The female, to remove all doubts concerning identity, was shot as she flew from the nest, which contained four eggs.—H. S., Richmond, September 13th., 1853.

The Purre, (Tringa variabilis,) *at Nafferton.*—A specimen of the Purre, (the Dunlin when in the summer plumage,) was shot on the Nafferton "Beck," within about a hundred yards of Nafferton Vicarage, on the 4th. of January, during the prevalence of the severe snow-storm. It is ten miles from the sea. I never knew an instance of the kind before; a proof I consider it, if one were wanted, of the extraordinary severity of the season. Even Hens' eggs were frozen hard, and the Gas-meter at Driffield froze, so that when I came through the station one evening, it was in darkness.—F. O. Morris, Nafferton Vicarage, January 6th., 1854.

Curious circumstance.—A few days ago I was informed by a friend that in February, 1852, he found a quantity of Sea-weed, which he did not identify, in some comparatively sheltered places on Stinchcombe Hill, in the Cotswold range, near Dursley. It had evidently been carried there by a recent storm, either from the Bristol Channel, a distance of about thirty miles, or from the muddy banks of the Severn, about six miles off.—W. Waldo Cooper, West Rasen, November 9th., 1853.

The Jack Snipe, (Scolopax gallinula.)—On the 16th. instant, I saw a Jack Snipe killed in the middle of Toft plantation. The plantation is an old one, nearly square, and contains about ten acres. I believe the occurrence of Snipes in old woods, except in cleared spaces, to be unusual, and as such may be interesting.—Idem.

Late stay of the Swallow, (Hirundo rustica.)—Last year I observed two Swallows on the 1st. of December; and this year I observed two on the 30th. of November; I took notes of both occurrences.—George Jackson, Chichester, December 21st., 1853.

The Little Auk, (Mergulus alle,) *near Whitby.*—During the first week in March, I had three specimens of the Little Auk brought to me; they seem to have been driven to our coast by the prevailing north-east winds. They were in an entirely exhausted condition, having been caught by the hand; I understand they are a very scarce bird in this country. Should any of your correspondents desire to possess one, I would dispose of one in exchange.—John Braim, Sleights Bridge, Whitby, 1853.

Asplenium fontanum.—I have had a specimen of this rare plant given to me to day. It was obtained in England this year.—H. C. Stuart, Christ's College, Cambridge, December 2nd., 1853.

Hooker only gives two localities for this very rare and distinct plant. Can Mr. Stuart ascertain the exact locality of his specimen?—B. R. M.

Note on the Caterpillar of the Goat Moth, (Cossus ligniperda.)—I met with a singular instance of tenacity of life in the Caterpillar of the Goat Moth. It had escaped from the box containing it, and when upon the floor was unfortunately trodden upon, a tea-spoonful of thick cream-like matter was squeezed out, and speedy death seemed certain. It lived however under these painful circumstances more than a week: it laid upon its back apparently lifeless, but moved when touched.—T. P. Fernie, Kimbolton, December 22nd., 1853.

Note on the development of Euphorbia.—I have in my possession, through the kindness of Professor Forbes, a dried specimen of *Euphorbia Peplus*, in which the stamens and pistils are developed into separate and distinct leafy branches, a satisfactory evidence, if any were wanting, that the stamens and pistils of *Euphorbia* are each a separate and independent floret.—J. E. Smith, 45, Bedford-place, Kensington, August 10th., 1853.

On the Vitality of Seeds.—I give the following on the authority of Professor Forbes:—Gardiner Wilson obtained wheat from mummies that had never been opened, carefully preserved and planted the grains which grew and came to perfection. There are now growing in the Horticultural Society's garden several raspberry trees, which were raised from seed obtained by Professor Lindley from an Ancient Saxon tomb, at the opening of which he was present. I think this is conclusive evidence that seeds will lie dormant for immense periods without having their vital principle destroyed.—Idem.

We have known several instances where mummy wheat has germinated. Some sown by our friend, Martin Tupper, Esq., author of "Proverbial Philosophy," grew readily, and produced well, we believe.—B. R. M.

Loligo vulgaris *taken at Banff.*—A specimen of this Calamary, which was brought on shore the other week at M. Duff, by Mr. W. Legall, fisherman, measured about four feet in length, and above one foot across the fins, and yielded a most splendid *gladius* of sixteen inches in length. This is the longest pen that I remember ever having seen as belonging to the common Calamary *of our seas.*—THOMAS EDWARD, High-Street, Banff, October, 1853.

Twaite Shad, (Alosa finta.)—A very beautiful specimen of the Twaite Shad was taken on the 26th. of August in one of the Salmon-nets on the Deveran, at a place called The Rack; it was quite unknown to the fishermen. It is the first that I have seen here, and, as far as I can learn, it is entirely new to the locality where it was procured, or even to our neighbourhood.—Idem.

Occurrence of the Two-spotted Sucker, (Lepidogaster bimaculatus,) *in the Moray Frith.*—I have just received from my very kind and much respected friend, David Greive, Esq., collector of H. M. Customs here, a beautiful specimen of the above Lepidogaster; which was brought on shore by one of our fishermen to-day. The little creature had got itself encased within a large but dead shell—that of a *Cyprina Islandea*, and in that condition it was brought to land. It is rare, if not altogether new, to this quarter: our fishermen do not know it. Having been kept alive a few hours in a tumbler of salt-water, it was quite amusing to observe its active and lively habits. One trait in its character I cannot pass over in silence, namely, that of its adhesive powers. Having become attached to the side of the vessel, which it did several times, it required a good deal of strength to be used by the finger to force it again from its place, such was the pertinacity with which it held on.—Idem, December 3rd., 1853.

Proceedings of Societies.

The Natural History Society of Glasgow.—December, 6th., 1853. The ordinary meeting of the Natural History Society of Glasgow, was held this evening. Thomas Gray, Esq., Vice President, occupied the chair.

DR. COLQUHOUN exhibited the following species of Lepidoptera taken at Ardrossan last summer: —*Phragmatobia lubricipeda*, (Fab.) *Luperina furva.* (W. V.) *Agrotis fumosa*, (Fab.) *Dianthœcia conspersa*, (W.V.) *Hadena dentina*, (Esp.) *Gnophos obscuraria*, (W.V.) *Harpalice galiaria*, (W.V.) (*Emmelesia rivularia*, (W. V.) *Eupithecia distinctaria*, (Herrick Schæffer,) *two specimens. E. ansteraria*, (H. S.) *Dosithea immutaria*, (Hub.) *Tortrix semialbana*, (Guen.) *T. adjunctana*, (Zr.) *Notocelia udmanniana*, (Linn.) *Grapholita nigromaculana*, (Haw.) *Ephippiphora trigeminana*, (Steph.) *E. Scutulana*, (W. V.) *Eupœcilia nigricapitana*, (Ste. Mus. Cat.) *Xanthosetia Zoegana*, (Linn.) *Crambus perlellus*? (Scop.,) *dark var. Eudorea ambigualis*, (Tr.) *E. coarctata*, (Z.) *Pempelia dilutella*, (Hub.) *Depressaria nervosa*, (Haw.)

DR. COLQUHOUN also exhibited a strongly marked specimen of *Phragmatobia Walkeri* (Curt.,) (var. of *Phr. menthrasti,*) taken in the neighbourhood of Glasgow.

WILLIAM GOURLIE, ESQ., president of the society, then read a most interesting and instructive paper entitled "Botanical memoranda taken during an excursion to Switzerland."

Business being concluded, the society adjourned till the first Tuesday in January.

The Querist.

Having a quantity of Birds' Eggs, common in the Midland Counties, perhaps they may be acceptable to some of your more remote correspondents or readers, who would exchange them for those of sea-birds, or others. Should any one wish for such exchange, I shall be glad to give him particulars of them.—T. P. FERNIE, Kimbolton, December 22nd., 1853.

Three years since I found a nest containing five white eggs, about the size of a Yellow-hammer, or rather less, the nest was placed under a stone, on a kind of rocky bank, with a small stream flowing at the foot; it was composed of dried leaves, fibres of roots, and lined with hair. I may as well mention that these eggs have a very smooth and highly-polished surface. I will feel greatly obliged by your informing me what they are, either by letter or by inserting your answer in "The Naturalist," as I have never been able to ascertain.—GEORGE HODGE, Newcastle, 1853.

Can any correspondent help us on this point. Were they the eggs of the Wryneck?—B. R. M.

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The very general want of information among our sportsmen upon the extensive tribe of water-birds which fall to their guns, is much greater than would perhaps be expected: thus if a Swan is shot, it is simply a Swan, although we have several very distinct species; a Wild Goose is seldom more than a Wild Goose, though we have ten distinct species; and a Duck, with the exception of the Mallard and Teal, is almost sure to be a Widgeon; and yet there are at least twenty-seven well marked kinds.

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NOTICES TO CORRESPONDENTS.

Communications have been received, up to February 15th., from J. Scrymgeour, Esq.;—Rev. D. Landsborough;—D. Ferguson, Esq.;—H. P. Cholmeley, Esq.;—J. P. Fraser, Esq.;—J. Gatcombe, Esq.;—J. L. J.;—C. W. Harrison, Esq.;—J. Garland, Esq.;—S. Hannaford, Esq., Jun.;—H. Newdigate, Esq.

Contributions have been received, up to February 15th., from W. G. Johnstone, Esq.;—C. Hauxnought, Esq.;—Rev. F. O. Morris;—C. W. Rothery, Esq.;—A. S. Moffat, Esq.;—J. Longmuir, Esq., Jun.;—C. Ashford, Esq.;—R.;—H. Buckley, Esq.;—H. Smurthwaite, Esq.;—W. Armstrong, Esq.;—J. W. Watson, Esq.;—Rev. W. W. Cooper;—Rev. R. A. Julian;—H. J. Harding, Esq.;—G. R. Twinn, Esq.;—J. Cavafy, Esq.;—T. Southwell, Esq.;—J. P. Fraser, Esq.

Books Received.—"The British Tritons." By John Higginbottom, F. R. S. 8vo. p. p. 16. 2 Plates.

"The Gardener's and Naturalist's Almanack" for 1854. By Joseph Harrison. London: Whitaker and Co. p. p. 96. 1s.

This Almanack will be found very useful to any person, more particularly to those interested in Horticulture; containing as it does much very useful and valuable information relating to Gardening, in addition to all the usual matter found in the best Almanacks. It also contains some general observations on Natural History, which may, we trust, lead to a more extensive cultivation of that most fascinating study.

"The Floricultural Cabinet," for January, 1854. By Joseph Harrison. London: Whitaker and Co. 8vo. p. p. 24. Published monthly. Price 6d. 1 Coloured Plate.

We can safely recommend this useful and ornamental Magazine to any of our readers who wish information on the culture of flowers and fruits. It is full of useful and valuable information, and will well repay an attentive perusal.

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M. D., Driffield;—Books for Review, and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row, London.

UTILITY OF THE COMMON MOLE, (*TALPA VULGARIS.*)

BY J. MC' INTOSH, ESQ.

It is a fact well known, that man, from the earliest ages, has been at war with his own class, it need not then surprise us that his arm should be lifted against numbers of his friends and natural allies, but such is the fact. He wages a perpetual war against the *Rook*, the *Owl*, the *Sparrow*, etc., and contrives "artful engines," to entrap the useful Mole, who taught him draining and sub-cultivation, and from whom, some day, he will learn a greater lesson, and call him a prophet, that is, when he has done hanging him. Wherever I go, I see trees and bushes in the corners of fields, and by gates of plantations, the hedges by the highway side, yea even at the door-side of some ruthless and ignorant biped, who calls himself 'lord of the creation,' covered with the dead bodies of the poor Moles, killed without mercy or judgment, Without being an enthusiast in a wrong sense, I kill nothing, not even. what is called vermin, but rats and mice, and these I should not have occasion to kill if my fellow-creatures would leave things as God has made them. The only excuse the farmer makes for destroying the Mole, is, "that their hills look unsightly;" "that they eat the seed-corn, and destroy the roots of the same in the construction of their hills;" and "that they stop up their drains."

Now, in answer to the first of these charges, I only wish for the sake of the farmer, and the welfare of his fellow-creatures, that there was nothing more unsightly on the generality of their farms than Mole-hills.—Look at the essence of their manure-heaps; the effluvia of gas, which is suffered to escape from them, is not only wasteful altogether, but is lost to useful vegetation, and what is still worse, fills the atmosphere with particles injurious to health, and often destructive to life. The evaporation from the farm-yard robs the farmer of part of his substance, starves his crops, and it is well if it does not, moreover, poison him and his family by its contaminating influence. Some receptacles for manure are so offensive, that if they do not generate typhus fever, in its worst form, which I fear is frequently the case, they at least cause languor and debility; and it is a fact well known, that these exhalations, so injurious to animal life, are the essence of vegetable life; and the volatile substance, which offends our senses and injures our health, if arrested in its transit by the hand of skilful industry, may be so modified in the great laboratory of nature, as to greet us in the fragrance of a flower, regale us in the luscious peach, pear, or plum, or furnish the stamina of life in substantial viands from the field and stall of the cultivator. Again look at the dirty hedges and the filthy ditches, etc., which to me are ten thousand times more unsightly and unprofitable than as many acres of Mole-hills.

I entirely agree with Mr. E. Jesse, in his "Natural History," page 137, when he asserts that Moles were intended to be beneficial to mankind. Sheep invariably thrive better, and are more healthy on those pastures where Mole-

BRITISH MUSEUM NATURAL HISTORY

hills are most abundant, owing to the wild thyme, and other salubrious herbs, which grow upon those heaps of earth. The healthy state of sheep is particularly remarkable on the extensive pastures of Lincolnshire, and there Mole-hills are extremely abundant. Deer, likewise, appear to be benefited by their existence in their pastures. It is asserted as a fact that after the Mole-hills had been destroyed in a park, which belonged to the Earl of Essex, in Herefordshire, the Deer in it never throve; and to use the words of James Hogg, better known as the 'Ettrick Shepherd,' "The most unnatural persecution that ever was raised in this country is that against the Mole, that innocent and blessed little pioneer, who enriches our pastures annually with the first top-dressing, dug with great pains and labour, from the fattest soil beneath. The advantage of this top-dressing is so apparent, and so manifest to the eye of every unprejudiced observer, that it is really amazing how our countrymen should have persisted, now nearly half a century, in the most manly and valiant endeavours to exterminate the Mole from the face of the earth. If a hundred men and horses were employed in a common-sized pasture, say from fifteen hundred to two thousand acres, in raising and carrying manure for a top-dressing for that farm, they could not do it so effectually, so neatly, or so equally, as the natural number of Moles on that farm would do it of themselves." Thus then I have disposed of the first silly charge against this useful and innocent little sub-cultivator, and would remark that it is not so wise to throttle him as you may think.

The second great charge against our "blessed little pioneer," is, "That he eats the seed-corn, and destroys the roots in the construction of his hills." This charge is so utterly absurd that it carries with it its own confutation. That they eat grain I flatly deny, having examined the stomachs of many, and have never found an atom of a grain in them. But it is stated, and that on good authority, that sixty thousand bushels of seed-corn are yearly destroyed by wire-worms, (*Elateridæ*,) some of which it is well known to naturalists, live in their larva state from four to five years, devouring the roots of wheat, rye, oats, and other vegetables; in some seasons destroying whole crops. Now it is upon these *Elateridæ* that the Mole lives, with other insects, worms, (*Vermes*,) frogs, (*Rana*,) with slugs and snails, (*Limax* and *Helix*,) the two last of which, it is well known, are wholesale destroyers of vegetable life in its young state. How absurd then is it to see the poor Mole hanging gibbeted by dozens, his clever paddles stopped by cruel ignorance. Well may we exclaim—

"Oh, ignorance! where is thy blush?"

"Prior to my coming to reside in my parish," says the Rev. G. Wilkins, of Wix, in the "Farmer's Magazine," "the land I occupy had been for many years in the occupation of a very old man, who was a determined enemy to every living creature of which he could not discover the benefit, and his enmity was especially directed against the Mole. In my barn, as a kind of heir-loom, hung a bundle of Mole-traps, which I at once consigned to the

fire. Then came the Mole-catcher for his salary, as he caught my Moles by the year. I paid him his money, and made him stare like a lunatic when I told him rather than kill them, he would do me a favour if he would bring me a cart-load of his Moles, and turn them down in my fields. My fields being near a village, where Rooks could not come, swarmed with wire-worms. Every year one-third of my crops was quite destroyed by them. One narrow field, surrounded with trees, was nearly useless from them. But at length relief came; I had long hoped to see my favourites, the Mole-heaps, and at length, as if by a simultaneous agreement, that little long field was full of Moles, which set to manfully upon the destroyers of my crops, and after some time completely destroyed them. They then passed over into the next field, and the pests in this field shared the same fate as the others. I now verily believe I have not a wire-worm left in my fields; and as the Moles have entirely done their work unsolicited, they have gone off to my neighbours with the same good intention."

The farmers on the continent, particularly in Belgium, are greatly averse to their being destroyed; and I believe that the most unpopular act in my respected father's life, was the introduction of the English Mole-trap into that country, about the year 1834; and although upon a royal domain, and at the command of Majesty itself, all endeavours to extirpate them proved unavailing; and the habits and wise judgment of a gardening and agricultural people were yielded to as an act of expediency. Happy I am to state that both His Majesty and my father have repented them of the evil, and are now numbered amongst the merciful defenders of our useful little sub-cultivator, the Common Mole! Thus, then, I hope I have clearly defended "the little culprit" from the second and absurd charge brought against him, to the satisfaction of his accusers!

The third charge brought against the tiny Mole, in an agricultural point of view, to those unacquainted with its usefulness, would lead many to sign its death-warrant. Against which I will place the following evidence from the pen of an agricultural gentleman, in the "Agricultural Gazette," for 1844, who says, "I have wet meadows, in which they do me vast service. One of my meadows was so wet that no Mole worked into it, but only burrowed on the surface, barely deep enough to cover his body with the roots of the grass and weeds, and this only in very dry hot days of August—the only time when worms could be found. I dug a few drains, and the next summer found the Moles worked as deep as the bottom of the drains, and into them. Another year the drains were cut as deep as the fall would allow, and the same result followed. My friends, the Moles, opened scores of their channels into the very bottom of these drains, and the meadow is now firm and sound. In all my meadows, finding the good they do, I never have them disturbed, but only in April send out a man to level their hillocks, then roll them, and I never have any complaint from the mowers. Depend upon it, that they are very beneficial to all lands, particularly to wet bog soil. When four feet

drains are made with inch tiles, they cannot enter, but would work at that depth in all directions, and be of the greatest possible use."

On some lands the drainage is wholly effected by the Mole, so far that the farmer might save himself some shillings, nay pounds, to the Mole-catcher. Let us hope, then, that henceforward he may be suffered to live in peace, and die of old age, throughout the length and breadth of our blessed land. To the farmer and the gardener this matter is worthy of more consideration than it has yet obtained.

Having thus brought the agricultural charges against the Mole to a conclusion, I will, D. V., in my next carefully examine the horticultural charges against him, and hope to gain "a verdict for the defendant."

5, *Middle-Street, Taunton, Somersetshire.*

(To be continued.)

A FEW NOTES ON THE NESTING OF BIRDS.

BY W. G. JOHNSTONE, ESQ.

In a small space of ground behind No. 9, George-Street, Dumfries, there is a little green-house in which are ranged three rows of flower-pots, each containing flowers; many of them very beautiful. In the middle row, and again in about the centre of it, stood, this spring, a pot containing some small-rooted cuttings of *Lonzia elegans*. One day a Blackbird appeared in the said green-house; and shortly afterwards his mate. All they did that day was seemingly to reconnoitre. Again, the following afternoon, not only did they appear, but they took possession of the pot above-mentioned, tearing up the small plants, which they used as the foundation of their nest; some pieces of rope and string lying in the green-house, were also made use of; and, as a finish, some of the rotted poplar leaves from outside.

The morning of the second day after they commenced to build, an egg was laid; and in uninterrupted succession one each day till five were laid. On the seventeenth day after the beginning of the whole, four young appeared; and in four weeks again, old and young disappeared in high health and spirits. What is remarkable, the bird sat quietly, and allowed the plants all around her to be daily watered without shewing any signs of fear, although the hands of the party watering would come within a few inches of her. The male took his turn on the nest. Another thing confirmed is that they regularly carried away the young birds' excrements, keeping everything clean and neat. The male bird had a few white feathers on his head.

A Robin was observed daily flying out and in, and the good lady of the house beautifully conceived the idea, that Robert was helping the Blackbird, but it was soon found out this was not the case; Robin also had a nest in the green-house on the ground in a corner below the stage, and here were brought out six Robins, all of which arrived at bird's estate. I may also

remark that the best of friendship seemed to subsist between the two families both in and out of doors. Water was regularly supplied to them outside, and they, (the Robins and Blackbirds,) have repeatedly been seen drinking at the same time. Being rather early in the year to keep the green-house door open all night, (to be ready in time for them in the morning,) the lady had a small hole made in one end of the green-house for their accommodation.—April, 1853.

This week the male Blackbird has made his appearance. The pot and nest had been laid aside, but now it stands in its former place, ready for their use we trust again this spring.—January, 1854.

On the top of an old tower in the Terraughtie Gardens near this, a pair of White Owls, (*Strix flammea,*) breed regularly. As I required an egg for my cabinet, this week I went out and clambered to the top, where I found the nest with four eggs, three of them the usual rotund form, the other quite oval, and a considerable length. About five feet from the Owl's, and on the same level, was a Jackdaw's (*Corvus monedula,*) with two eggs, and a little lower a Sparrow's, (*Passer domesticus,*) with three eggs.—April, 1853.

In an old fir plantation, parish of Kirkmahoe, Dumfriesshire, I this year had the pleasure of discovering a Siskin's nest, containing one egg, and being so valuable, what could I do but take it for my cabinet. The nest was close to the trunk of a larch tree about eight feet from the ground, not particularly well concealed, and not remarkable for neatness; it was composed of Hypnum, hair, and fibrous roots, (no feathers,) rather firmly compacted. Near to the same spot last year a nest was taken containing young; the party who took them succeeded in rearing two of them. In the same wood the Crossbill, (*Loxia Europœa,*) breeds; for some years the nests have been regularly found with young. I must next year try for eggs.—April, 1853.

On a rugged cliff, Auchenstroan, Glencairn, Dumfriesshire, the Peregrine-Falcon, (*Falco peregrinus,*) builds her nest, and brings forth her young; while a little lower on the same cliff may be seen the Ring Ouzel, (*Turdus torquatus,*) quietly and undisturbedly brooding over her charge; lower still by the brink of the stream, may be found the compact cunning nest of the Water Ouzel, (*Cinclus aquaticus*) These three birds are only to be found in the secluded glens of our native hills, the very sojourning among which gives a calm and pleasure to the mind not easily described, but deeply felt by the lover of nature and nature's works, and above all of nature's God.

The following winter visitors have been seen in this neighbourhood lately:—Brambling, (*Fringilla montifringilla,*) Crossbill, (*Loxia Europœa,*) Quail, (*Coturnix Dactylisonans,*) Water Rail, (*Rallus aquaticus,*) Bernacle Goose, (*Bernicla Brenta,*) Tufted Scaup Duck, (*Fuligula marila,*) Great Northern Diver, (*Colymbus glacialis.*) The Quail is certainly the rarest of the above with us. I had a fine specimen brought me the other day shot in this neighbourhood.

Greenbrae Cottage, Dumfries, January 1854.

ORNITHOLOGICAL AND OTHER NOTES.

BY S. STONE, ESQ.

Singular choice of situation for a Blackbird's Nest.—In the course of a ramble last spring through a wood adjoining Cokethorpe Park, I "paid a morning visit" to a Magpie's nest of the previous year, for the purpose of ascertaining whether it had again become tenanted; great was my surprise on cautiously approaching the spot and looking into the nest, for it was situated in a bush about five feet only from the ground, to see the bright eyes of a female Blackbird, (*Merula vulgaris,*) flashing full, yet timidly, upon me, as she was sitting in the midst of this bower of thorns without the roses; having chosen this extraordinary site for the construction of a domicile for her "expected family." I should have been glad to have found that she continued in quiet possession, and that her "fondest hopes" had ultimately been realized; but alas! poor thing, retributive justice overtook her, as it will sooner or later overtake all who surreptitiously "build upon another's foundation," for on visiting the nest again a few days afterwards, I found that some one less scrupulous than myself had robbed it of the eggs it had previously contained: or as inexorable landlords seize upon the goods and chattels of such of their tenants as from want of means or from lack of principle, fail to "pay their respects" and something besides at "quarter day," even so might these eggs, the sole "treasure" of this poor bird, have been seized upon by the owner of the original fabric, in liquidation of a claim for "ground rent;" whether such a claim might or might not have been a legal one, I must leave to the proverbially "fertile brain" of "Gentlemen learned in the law" to discover: albeit, I cannot help thinking that if the motto "jus supra vim," were reversed it would be very applicable in the above case; unquestionably might does at times dominate over right, among other creatures as well as amongst those of "the Genus Homo."

An incident in the Nesting of the Missel Thrush, (Turdus viscivora.)—On the 24th. of February, 1849, I observed a pair of Missel Thrushes in an orchard adjoining the residence of Henry Eustace, Esq., Ellesborough Grove, near Wendover, Bucks., busily engaged in the task of nidification. The building continued to progress satisfactorily enough till the evening of the 28th., when a heavy fall of snow followed by several days of severe frost caused a "suspension of the works" till the 21st. of March, when the weather in the interval having become more genial—operations were actively resumed. The nest was finished and the first egg deposited on the fourth day from the later date. This is the only instance which has come under my observation of a nest having been partially built, abandoned for several weeks, and then again proceeded with. There is a certain class of politicians whose cry is "economy and retrenchment," the simple meaning of which said cry if carefully analyzed would I fear be found to be no more patriotic or philanthropic than this—all possible abridgment of the comforts of other people, and all possible increase of their own. To this class I would by no means refer the above-

mentioned birds, yet of a verity they must be considered "thorough economists" —economists in "the raw material," economists in time, and economists in labour; or did the exigencies of the case require extraordinary dispatch? and is it possible that in order to meet this, they might have been gifted with discrimination enough, or even with powers of calculation sufficient, to enable them to arrive at the conclusion that a fabric half-raised might be completed in just half the time that would be indispensable in the construction of a fresh one? Their proceedings would almost seem to justify such a supposition.

A Moorhen chased by a Rat.—Standing one evening in autumn on the margin of a moat, near the just-named Gentleman's residence, an extraordinary noise proceeding from the opposite side suddenly arrested my attention, when on turning my eyes in that direction I observed an enormous Rat, (*Mus decumanus,*) in hot pursuit of a Moorhen, (*Gallinula chloropus.*) The extraordinary sounds, which partook of something of the nature of a hiss and a yell, and which I can compare to nothing so aptly as those produced—of course in a less powerful and appalling degree—by the escape of the steam from the boiler of a railway steam engine, intermingled with its horrible whistle, or rather shriek, warning all who may not feel desirous of undergoing the process of decapitation, amputation, or mutilation, to "keep clear of the line," I found proceeded from the pursuer, in good sooth never before nor since have I heard "sounds such as these" proceed from the œsophagus of mortal Rat. If the pursuer gave vent to this extraordinary noise under the impression that it would so act upon the nervous system of the pursued, as to paralyze its efforts at escape, he for once "reckoned without his host," for instead of producing any such effect it chanced to have just the opposite one, "to wit" the selfsame effect which the poet informs us fright produced upon the steed bestrode by that

"Citizen
Of credit and renown,"

John Gilpin; it only

"Made him faster run."

Although the bird was not foolhardy enough to pit itself against so formidable an antagonist in a "stand-up fight," it nevertheless seemed to have selected for its motto "never say die," and had moreover presence of mind enough promptly to act thereon, deeming, as "featherless bipeds" have deemed, that "the better part of valour is discretion." Escape from an enemy is almost tantamount to victory over him, for although the enemy may not be said to be defeated, his intentions effectually are: in this sense I had the satisfaction of seeing that the Moorhen was victorious over the Rat, and heartily did I congratulate it, as Hudibras did himself and Squire, on having

"Made so resolute
And brave retreat."

The Goat Moth, (Cossus ligniperda.)—The Entomologist who may be in search of caterpillars of this species, will require no canine or other agent to

reveal to him their whereabouts, for his olfactory organs, unless indeed he should chance to have been relieved from the inconvenience and unpleasantness their sensitiveness sometimes occasions, by his having been privileged to dwell in the immediate vicinity of a Currier's yard, a depôt of "The London manure company," Leadenhall market, or some other locality equally distinguished for the salubrity of its atmosphere will prove an amply sufficient guide, he has only to walk leisurely round any suspected tree, halting for a moment at the point where his perambulations have brought the said tree

"Betwixt the wind and his nobility,"

and there will be no mistake as to whether the game he is in search of abounds there or not. I do not know whether all kinds of trees are equally to their taste, but those in which I have usually found them are the Oak, the Elm, the Ash, and the Pear. In the garden of a cottager near here, are many trees of the latter species, the whole of which, although they should be just in their prime, are in a state of rapid decay, occasioned by the ravages these creatures have made upon their interior, the principal stems being in many places absolutely honey-combed, they seem in fact fated—would that this fate were reserved exclusively for trees—to be bored to death. We have often, when the wind has been in the right direction, scented these creatures at distances ranging from twenty to fifty yards and upwards, so powerful is the odour they emit when large numbers of them are congregated together.

"An affair," not "of honour," between a Weasel and a Rabbit.—The following occurrence, witnessed by my friend, Henry Eustace, Esq., and related by him to me a short time ago, affords a striking proof of the keenness of scent possessed by the Weasel:—Walking early one afternoon through one of his fields, his attention was drawn to a Rabbit, (*Lepus cuniculus,*) which kept dodging, now in, now out of the hedgerow, which bounded one side of the field; suspecting, from seeing the animal astir at that unseasonable hour, for Rabbits, in common with Owls, fashionable people, and other creatures of nocturnal habits, affect to shun the glare of day, being seldom to be met with till toward evening, that the privacy of its (h)earth must have been invaded, or at any rate that something must have gone wrong in its domestic affairs, my friend was induced to stand still, and watch more attentively. His suspicions soon proved to have been well founded, for presently he perceived a Weasel, (*Mustela vulgaris,*) tracking, with deadly precision, the steps of the fugitive, which having gradually become aroused to the consciousness that the covert of the hedgerow afforded it no protection from the pursuit of its dreaded enemy, at length boldly struck out towards the middle of the field, where it secreted itself beneath the shelter of an overhanging tuft of long grass. The Weasel having come to the point at which the Rabbit left the hedgerow, paused but for a moment, and then guided by its keen unerring sense of smell, pursued the same course which the Rabbit had taken; and

on reaching within about two feet, or springing-distance of the place in which its intended victim lay concealed, sprang with fell intent full upon the spot. The Rabbit, however, seemed to be in no humour for tamely yielding up its life while a "forlorn hope" still existed, for having no doubt from some convenient loop-hole watched the advance of its pursuer, it, simultaneously with that pursuer's spring, rushed from its hiding place, and again bounded off across the field. At this juncture, my friend, moved with a feeling of pity towards the Rabbit, or of indignation against its persecutor, or perhaps a combination of the two, hastily advanced to the rescue; and the enemy having, in the eagerness of pursuit, marched too far from "head quarters" to be able to make good its retreat, there and then met the fate which my friend conceived its murderous intentions merited. How the affair might otherwise have terminated, must of course be left to the imagination to conceive, but there can be little doubt that it would have resulted in a manner as tragical in the case of the Rabbit, as it has appeared to have done in that of the Weasel.

Brighthampton, September 13th., 1853.

ON THE COMMON RING-SNAKE, (*NATRIX TORQUATA.*)

BY MR. MICHAEL WESTCOTT.

Among our many British Reptiles, none surpass in beauty the Common Ring-Snake. Its beautiful dazzling eyes, its neck encircled with a golden band, its livid tongue, its curiously constructed scales of various colours, and its graceful movements, are objects of intense interest even to a casual observer of nature, when viewed without prejudice or timidity. I make it a rule, to ascertain, if possible, what venomous properties are invested in subjects of Natural History which come into my possession; but I never succeeded in finding any venom whatever attached to the subject of these remarks; at least so far as it is used in self-defence. I have teased it for an hour together to make it bite, without success. It is a well-known enemy to the equally harmless Toad; an animal which has been and is treated with an abhorrence and cruelty which superstition is alone capable of producing. I have seen Toads of an enormous size taken from the stomach of a Snake, indeed so large were some of them, that it would appear incredible they could have been swallowed by their common enemy, had I not witnessed the extraction.

There is a prevalent belief in many localities, and a belief in which some men of science concur, that the Snake swallows her young at the sight of approaching danger; but it never has been stated by an eye-witness as a fact to be relied upon, for all who have yet written upon the subject, have done so from hearsay—the *ignis fatuus* to the truthful naturalist—or from their own imperfect observations. We have an instance of this in "The Naturalist," vol. ii. page 233, where Mr. Garland says he saw a Snake glide into a rut made

by cart-wheels," he "looked into the rut, and saw the Snake and several young ones, not very large;" he "stepped back to pick up a stone, still keeping his eye upon the spot, when he saw the Snake glide out of the rut, cross the roadway, and go into the hedge at the side. He then went to the rut, and looked in, thinking to take the young Snakes; but to his "surprise" he "saw none of them." He searched for them in vain, and had no "doubt but they must have been taken away by the old Snake swallowing them 'pro tem.'" He "was quite sure" he "must have seen them had they remained there, as he never once lost sight of the spot, although he did of the depth of the rut."

Now when Mr. Garland lost sight of the bottom of the rut, where he saw the young Snakes, was it not possible for them to glide away and cunningly hide themselves without his knowledge of their whereabouts? If he had only drawn back a short distance, so as not to lose sight of the little ones, why then he might be able to satisfy himself and his readers upon the much mooted subject of the Snake's "swallowing her young," instead of leaving it among the things that are *doubtful*. I certainly should have taken advantage of such an opportunity as Mr. G. had, in settling once for all this important question in the history of the Snake. For instead of walking backwards in search of a stone to slaughter a *harmless* reptile—a fact which Mr. G. might have known by his "*experience* with them when a boy," I should have endeavoured to obtain ocular proof whether the old Snake swallowed the little ones, or whether she left them to take care of themselves.

For my own part, I feel satisfied that the female Snake has nothing whatever to do with her young from the time they emerge from the eggs, till they are full-grown, and certain it is that she disowns all maternal affection for them then. I believe so because it would follow as a rule that if ever any one single Snake was seen to swallow her young to hide them from intruders, her congeners would be instinctively led to do the same thing; for nature is not a partial bestower of her gifts, to lead any of the lower animals, untutored by man, to act differently in their habits and economy to others of their class, especially in the care of their young.

> "Undamped by time, the generous Instinct glows
> Far as Angola's sands, as Zembla's snows;
> Glows in the Tiger's den, the Serpent's nest,
> On every form of varied life imprest."

We see that the attention which a Cat or Dog pays to its young, is common to the whole species. And it would likewise follow that if the instinct attributed to the Snake of swallowing her young were true, it would be of common occurrence, and might be witnessed by every one who would deem it worthy of observation. I have met with many a young Snake from three to six inches long, and no bigger round than a Crow's quill. I have also watched them emerge from the eggs, and soon after distribute themselves to the four quarters of the globe; a fact I think sufficient to set at rest the

possibility of their dam collecting them together again, and swallowing them 'pro tem.' It is true I have never seen but one brood of Snakes quit the eggs, and in that case the old one might have been killed, and thus her absence on this occasion be accounted for. But I have seen as many as fifty young ones, as described above, separately and collectively, but never have seen any old ones near them, although I have watched them for some time crawl through the hedge-grass, or coil up on a warm bank, basking in the sun.

There is no doubt if the readers of "The Naturalist" investigate the subject with assiduity next spring and the succeeding months, that it might be finally settled to the *satisfaction* of all true *naturalists*. It will be only for them to search for the chain of Snakes' eggs *deposited this year* in dunghills, heaps of rubbish, or around the base and shady nooks of old lime-kilns. Having found the eggs, the finder, instead of doing the same as the Ichneumon, *(Herpestes Ichneumon,)* does with the eggs of Crocodiles, he must let them remain, and pay them a visit every fine day if possible, which can be done by most persons, if it is not too far from their residence, and especially if they wish to clear away doubtful mists floating between them and their delightful study.

Saint Cuthbert's Place, Wells, October 17th., 1853.

THE SALMON MANUFACTORY ON THE TAY.

TO THE EDITOR OF THE NATURALIST.

Sir,

Allow me to call your attention to the enclosed paragraph from "The Times" of the 9th. instant. The experiments which are going on in Salmon breeding are interesting, and I trust some of your correspondents may furnish you with a detailed account of them.—W. Waldo Cooper. *Rectory, West Rasen, December 15th.*, 1853.

"The ponds for this purpose are situated on the river bank, near Stormountfield, the spawning-boxes being sixteen feet above the summer level of the river. The water which supplies the ponds is taken from Stormountfield lade, (but, owing to the impurity of the Tay during spates, a supply is also to be taken from a neighbouring spring,) by a pipe with a valve into a filtering-pond; thence it is carried by a canal along the upper end of the spawning-boxes, through which it runs. These boxes are eighty-four feet long by one foot six inches broad, and three feet deep. They are placed with a fall of six inches, so as to allow the water to flow freely through them, and are partly filled—first with a layer of fine gravel, next coarser, and lastly with stones somewhat coarser than road metal. In distributing the ova, it is gradually poured out of the vessel which holds it, at the upper end of the box. The water flowing downwards carries it among the stones, under which

it settles down, and by gently applying a few buckets of water at the upper end of the boxes the ova are taken down and distributed equally among the gravel. When the young fry are in a proper state they are allowed to escape into a pond situated at a foot lower level than the boxes, where they will be fed, and allowed to remain, until such time as they are in a fit state to be turned into the river. This pond is not yet made, but will be finished by the time the fry are hatched. Great care has been taken to prevent any animal entering with the water that would prey upon the young fish.

Mr. Ramsbottom, from Clitheroe, (who has experimented successfully for the Messrs. Ashworth, on the Lough Corrib waters, in Ireland,) has the sole management of the Tay ponds. Saturday was a remarkable fine day for the season, and we were privileged in being present at the operation of stripping the fish. When we arrived Mr. Ramsbottom had already got about fifteen thousand ova in round tin cans, and he showed us an oval-shaped tin box with a lid, which contained a small male fish swimming in water, which, he said, was waiting for his mate. Presently the net was shot in the Tay at the mouth of the Almond, when two fine female fish ripe for spawning, from eighteen to twenty pound weight, along with a small male fish, were caught. Mr. Ramsbottom having taken the largest female in his left hand, drew his fingers firmly down both sides of the belly of the fish, when the ova flowed in a stream into the tin box formerly mentioned, in which there were a few inches of water. The fish was instantly returned to the river, and, after a short time, sailed off as if nothing had happened to it.

After the ova had been washed, by water being poured on and off—care being taken never to allow it to be exposed to the air—the male fish was brought (which all this time had been in the river under a fold of the net, and manipulated in the same manner as the female, only a small portion of milt being required. On the milt being shed a slight change was seen to take place in the colour of the ova, which became paler. Water was again poured on and off, when the operation was complete. The ova were then poured into round tin cases and carried to the ponds; when we left the river side upwards of four hundred thousand ova in fine condition had been obtained. We observed that a few of the ova, after impregnation, turned white, instead of being a fine salmon colour. Mr. Ramsbottom said they were barren ova.

In the month of March the fry will have burst their shells, when we hope to report further.

We should be obliged for any further information on this interesting subject. —B. R. M.

SOME ACCOUNT OF THE LEPIDOPTERA ROUND EXETER.

BY MR. EDWARD PARFITT.

(*Concluded from Vol. III., page* 265.)

Perricallia syringaria, (Lilac Beauty,) is very rare, I have only taken one specimen. *Rumia cratægata* is as common as the one above is rare. *Ourapteryx sambucaria:* this beautiful moth is tolerably plentiful. *Campæa margaritaria* is a rare insect, at least I have only been able to take one or two of them. *Alcis rhomboidalis,* (Willow Beauty:) this is frequently to be met with. *Numeria pulveraria:* this is very rare indeed, though I have had the good fortune to meet with two specimens. *Cabera pusaria* is rather common. *Bradyepetes amataria*: several of this beautiful moth are to be taken here. I have met with them most frequently on the west side of Exeter. *Phasiane plumbaria* is plentiful on Haldon, darting out of the furze and heath which abounds there. *Anaitis plagiata* is not common, though several are to be captured in a season. *Coremia fluctuata* is particularly abundant. *Cidaria propugnata* is also common: of three species belonging to the genus I have not been able to ascertain the names. *Electra marmorata* is also common in most years. *Harpalyce silaceata* is by no means common. *Steganolophia prunata* is tolerably plentiful. The Streamer, (*Anticlea derivata,*) is by no means a common moth, though several are to be taken during a season. *Polyphasia Russata* is comparatively rare; also two varieties whose names I have not been able to satisfy myself about. *Cheimatobia brumata,* the males of which are particularly common; four years ago I never saw them so numerous before nor since, but I have not been able to obtain a single female specimen, though I have looked our fruit trees over and over again. *Eupithecia Linariata:* four specimens of this beautiful little moth I bred from larvæ, found feeding on the seeds of *Linaria vulgaris. E. rectangulata:* this is a rare moth about here. *E. austerata* is very common in this neighbourhood. *E. centaureata:* this is a rare moth, I have only been able to obtain a single specimen. Three other species belonging to this genus I have not been able to obtain the names of. *Triphosa dubiata:* this is very rare indeed, I have only seen one specimen, which I took three years ago.

Camtpogramma bilineata: this is particularly common, every hedge abounds with them. *Abraxas Grossulariata:* the caterpillars, and also the moths, are much too common. *Venilia maculata:* this moth abounds on Haldon amongst the furze and heath. *Corycia taminata:* I have only taken one specimen of this pretty moth. *Melanthia Alchemillata* is very common. *Zerene adustata* has been taken here by Mr. G. Norcombe; also *Lomaspilis marginata:* one specimen of this beautiful moth has been taken here by the same gentleman. *Acidalia aversata* is very common. *Thalera Æstivaria* is not a common moth by any means, as I have only taken two in six years. *Timandra imitaria:* this is not very common, and what specimens are caught are generally rubbed, so that a perfect specimen would be an acquisition. *Cilix spinula* is tolerably

abundant some seasons. I possess a pair of moths, marked in the British Museum's General Collection, *Crambus pratea*. I took them three years ago near Exeter, but I cannot find the specific name in the Museum's catalogue; also another named in the same collection *Crambus pœlea*, which I cannot find in the same publication. The moth is very common about here; several other species belonging to this family I have not been able to determine the names.

Aglossa pinguinalis: this moth is tolerably plentiful. *Pyralis farinalis:* this is very common in stables, coach-houses, etc. *Phlyctænia Sambucalis* has been taken here by Mr. G. Norcombe. *Eurrhypara urticata:* this is an abundant species. *Nemophila noctuella:* this is also very common; and *Botys verticalis* I never saw so plentiful as they have been this year—hundreds might have been taken in a night in the lanes between Exeter and Topsham. *Botys lancealis:* this is a rare insect, I have only heard of or seen but one, which I possess; one other species of this genus I have not been able to obtain the name of; it is common about here. *Pterophorus pentadactylus* is tolerably abundant, and *Alucita hexadactyla* is also an abundant species.

Tortricidæ: of this interesting and beautiful family of moths, I am sorry to say I cannot furnish many names, though I possess a number of species. I also have a number of species of the family *Tineitis*, which I shall defer to some other time for the want of reference. In the last-named family we have *Tortrix viridana:* this is found in considerable abundance on Red hills, about two or three miles from Exeter, on the north-west side; the hedges there are principally oak, and there these beautiful little moths are to be found in great numbers. *Lozotœnia Carpiniana:* this is common in gardens and hedges round about Exeter. *L. Gerningana* is also an abundant species. *L. lœvigana:* this is a common insect in hedges and gardens. *Spilonota Roborana:* this is not a common moth, at least I have only met with two or three specimens. *Æcophora sulphurella:* both the larvæ and moths of this beautiful species are abundant in this neighbourhood; the larvæ are found in old posts and rotten branches of trees in great plenty. *Yponomeuta padella:* this insect is much too common in orchards and gardens; the caterpillars, which are gregarious, live on the apple trees, and where numerous cause a deal of mischief.

I bred some very interesting little moths this year from larvæ, found feeding on *Stellaria polostea*. The caterpillars are confined, or rather live, in small somewhat fusiform cases; they fix themselves to the under surface of the leaves, and eat a round hole just large enough to admit the body; they then go on and eat the parenchyma, or fleshy part, so far as they can reach all round. When they have eaten as far all round as they can, they remove to another place on the leaf, and go on as before. They soon exhaust a leaf of its fleshy parts, leaving nothing but the two skins of the leaf, and these are untouched, and turn white. When a number of these caterpillars are at work, they give the plants a peculiar mottled appearance, and the little cases hanging down on the leaves look very curious. The little moths are

of a somewhat light brown colour, the points of the anterior wings with a long fringe of the same colour. If any of the readers of this work can furnish me with the name of it, I shall feel greatly obliged.

Thus ends my list of Lepidoptera, so far as I have been able to ascertain the names. When I shall be able to make out the names of what I have remaining, and what I may collect, I shall be most happy to communicate them through the pages of "The Naturalist."

Exeter, November 9th., 1853.

STRAY NOTES ON THE ELM.

BY JOHN DIXON, ESQ.

Some eight or ten years ago, a violent gale of wind did considerable damage in this neighbourhood; its fury being most apparent in some parts of the woody districts about Temple Newsam and Methley, where many a noble tree that had long withstood the wintry blasts, was that day laid prostrate, or reduced to a complete wreck. One victim to this elementary strife at Methley, was the skeleton of a huge elm, some fifteen feet in circumference at the base; time had long ago shorn it of all verdure, and nothing but its scathed trunk remained, from which a few large branches spread out in curious contortions, making a fit subject for the pencil of the passing artist. Several large fungi had made their appearance on it, sure evidence of a stealthy decay, yet, for all this, few would have thought its downfall so nigh at hand. In falling it broke into several pieces, when the bole was found to be quite rotten, furnishing the lads with a plentiful supply of "touchwood," as we call it in these parts. But the most curious circumstance connected with it arose from the discovery of a singularly shaped object in the very heart of the bole. The best guide to its shape, unaccompanied by a drawing, and on a reduced scale, would be found in the common cup moss. Its discovery, as a matter of course, raised sundry rustic, philosophic conjectures, consequently the first reports were much at variance, one setting it down as a "wooden trumpet," while another strenuously averred it to be some sort of an "old-fashioned cocked-hat;" so that in the midst of much disputation respecting its origin, it soon formed a good "cock-and-bull" story. A friend of mine procured this wooden wonder and presented it to me. The substance resembles close-grained oak, but somewhat harder; I have seen similar objects before, but being at a loss with respect to their origin, deem it worth notice in the valuable pages of "The Naturalist," the circulation of which I am glad to find is progressing.

A few years ago the road entering Leeds at Sheepscar, was beautifully ornamented with several noble elms, one of which was fourteen feet in circumference; they were of great height and most beautifully proportioned, one might have travelled miles to find their equals. They seem to have been regarded with a favourable eye more than a hundred years ago, for we find

that when General Wade and his army encamped here in 1745, a Mr. Whitelock furnished the soldiers with coal, on condition that these trees, and two or three others which until lately stood in Wade Land, might be spared, for it appears they had cut down nearly all others for fuel, so that it is probable these were the only few that survived the campaign, being however (unfortunately it may be said) too near a rapidly increasing town, they were cut down to make room for such modern innovations as now crowd the spot where once they flourished, in the glory of a green old age. The timber was perfectly sound to the very heart, and if the number of concentric rings might furnish correct data, they must have arrived at a great age.

In the centre of one, near the base, two smooth pebbles were found, one of which I procured; it is perforated apparently by some natural agency, perhaps the pholas, for the stone is quite foreign to this district. I have seen such stones attached to keys by country folks, to keep off "bogies, witches, and other such cattle," probably it has been an amulet of this kind, dropped here during the so-called "good old times." A great number of old-fashioned tobacco pipe heads, a gun-lock, and sundry collections of beef and mutton bones, were found about the roots; interesting relics of this campaign, from which we may augur that the gallant sons of Mars at least lived well, smoked hard, and doubtless drank deep.

I have somewhere read an account of a large Elm, in the heart of which several initial letters were discernible, apparently caused by incisions in the bark when the tree was young, perhaps one of the most interesting relics of this kind is shown in the museum attached to Kirkleatham Hospital, and is thus described by Mr. Walbran, in his pleasing "Guide to Redear." "There is, too, a portion of a tree, grown in Newbrough Park, near Thirsk, and sent here by Lord Fauconberg, which, on being cut down, and split up for billet-wood, was found to bear the following inscription graven in rude Roman capitals, about five or six inches high, on a bole or core of about twelve inches in diameter, which came out entire from an outer rind of about four inches in thickness:

This tre lovng time witnes beare
Of toww lovres that did walk heare.

The letters encircle the tree in nine spiral lines, occupying a space of about five feet, and are impressed both on the bole to which they have been originally committed, and on the rind by which they have been subsequently enveloped. Two hearts, each transfixed with an arrow, after the usual and approved fashion, are introduced in the third line, and in one of them may be traced the letter B. The other is uninscribed"

Not many years ago a large elm was cut up at Tockwith, when several bullets were found imbedded in it, no doubt relics of the sanguinary battle of Marston Moor, fought in July, 1644.

Some writers assign the healthy period of the elm to about one hundred and twenty or thirty years, but consider their most profitable age to be from

fifty to sixty years; but this of course cannot be adopted as a general scale, so much depending on soil and situation, for we find the Sheepscar Elms, which must have been at the very least two hundred years old, perfectly sound, and making capital timber; while others at no great distance, planted probably not more than eighty years ago, were fast decaying, a fact which may be attributed to a damper soil and situation. One of these last was quite hollow, yet still continued to flourish, but at last several fungi made their appearance about the roots, and then it soon perished. I remember a pair of Starlings building in it for many successive years; the nest was in a crevice of one of the larger branches, and somewhat difficult to reach; the entrance was too small to admit the hand, and the lads were continually hacking away to get at the young, but they were too deep in the trunk, and could never be got at, a fact which the poor birds seemed aware of, for they built in it for years after. Another branch was at one time occupied by a colony of Humble Bees, but these fell victims to suffocation.

The Elms at Kirkstall Abbey, one of which is fourteen feet in circumference, must also be more than two hundred years old, and still they seem in perfect vigour. The roots have forced their way through an almost impenetrable accumulation of stones and rubbish, and present a curious contorted appearance, being also inosculated in many parts, that is, one root or branch intersecting another, a feature, it is said, that first suggested grafting. A remarkable example of this kind may be seen in a little copse opposite Bishopton Bar, on the left hand side of the road leading from Ripon to Studley. It is a young Maple, with the upper branches intersecting each other in every direction, presenting one of the most curious specimens of inosculation it is possible to conceive.

While adverting to the powers of vegetation, it may not be out of place to mention an example at Walton Hall, in the shape of a Hazel tree growing out of the centre of a large millstone, which it has raised several inches from the ground; some very interesting particulars connected with it may be found in Waterton's delightful Essays on Natural History. A friend of mine once had a flag in his stable misplaced by a species of fungus growing under it; and I have heard of Ivy penetrating through a strong stone roof, much to the discomfort of the inmates of the house. In two or three old churches I have visited in my rambles, the Ivy has forced its way, and continues to flourish in the sacred interior, not without a most beautiful effect, from which a pious moral may be read.

We have many Elms in this district ranging from eight to fourteen feet in circumference. This tree seems to have been a great favourite in the olden time, for we have scarcely any antiquated mansion that cannot boast its noble Elms; there are isolated specimens, too, remarkable, for their size, or celebrated on account of their historical or legendary associations. About Leeds they are generally a little later in budding than those in the country, yet it is one of the first trees to remind us of returning spring, for early in the season it puts forth its purple flowers, which are closely followed by leaves of cheerful

green; and although the contemplative mind can find charms and beauties in every season, yet we are always glad to hail the halcyon days of spring, when the meads are once again spangled with floral beauties, and the woods resound with nature's joyous choir; it is then we find that

> "Trees, and flowers, and streams
> Are social and benevolent; and he
> Who oft communeth in their language pure,
> Roaming among them at the cool of day,
> Shall find, like him who Eden's garden dressed,
> His Maker there to teach his listening heart."

Leeds.

SAND MARTINS, (*HIRUNDO RIPARIA.*)

BY O. S. ROUND, ESQ.

Of all the Swallow family, there is not one perhaps more amusing and attractive than the Bank or Sand Martin, though the least indebted to nature for "personal attractions." How often have I sat on the river's bank, in the close of an October evening, watching with wonder and admiration the settling of myriads of these birds to roost in the willow beds on the banks! and what food for mental speculation did it afford me! Nor was it the sight alone, but as the light waned, and objects were no longer fairly discernible, there came, as it seemed, more distinctly on the ear the "hum of wings," comparable to nothing so much as the "rush of mighty waters." To attempt to calculate the numbers would have been a useless as well as fruitless task, for many thousands were most probably there; and when the chill air no longer permitted me prudently to remain, it seemed as though the ceaseless feathers would never cease their stirring, arising, I suppose, from the difficulty of the slender waving twigs being found adequate to the accommodation of such multitudes, each in such a snug position as, we may fancy, even a bird would choose for his roosting-place. I could well picture to myself some half-dozen occupants of a bending bough comfortably settled for the night, when an ousted wanderer, by adding only his tiny weight, would upset the whole economy, and oblige all, like himself, to resort once more to their wings. But what a sound and sight it was! truly astonishing; and as the bright moon shone mildly on the glittering stream, still as I receded I could hear the same eternal hum and fancy the same eternal commotion.

They were certainly in good practice of their flying powers, and good need would they full soon have of them all; and it was a natural thought of how soon that mighty legion would be fluttering, like butterflies of larger growth, aloft in the fields of air over the wide ocean to distant realms, dispersed, and when again to be re-united, perhaps as to as much as two-thirds, never; for it is a notorious fact that to the same locality the same number of pairs regularly return. This curious fact was discovered by Gilbert White, the Selborne historian, with regard to the Swallows and Martins, and why

should it not hold good of the Bank Martins also? although their multitudes would almost defy the computation.

Linnæus named these evidently from their habit of frequenting water-sides, the word *riparia* signifying pertaining to a river's bank, and certainly this is the habit with the mass, but there are parts of the country quite remote from considerable rivers where I have often seen colonies of these birds. One instance of this kind was somewhat singular. It was, I think, somewhere about the year 1824 that a colony of Bank Martins had established themselves in the sandy sides of the Great Western Road, near Virginia Water, well known as the south-eastern extremity of Windsor Great Park. The rain having washed away some of this soft soil, it was thought advisable still further to shelve the earth away and lower the hill, and this work of course destroyed the fastnesses of these little creatures, who, at their return to their old habitat, found it not. What was to be done? True the bank remained, and the holes being utterly worked away, it might be supposed that it would have been the same thing to have dug away anew there as well as anywhere else, not to mention local predilection, but, whether the soil was too hard or not I cannot say, at all events they fled the spot, and at once established a colony in a cottage garden some three miles distant, in a soft sand-pit side, and there for years—many years—regularly bored and nested, when, by the destruction or filling up of the pit, they were again ousted, and I know no farther of their movements. It is not uncommon for a few pairs suddenly to take up their residence where they have never before been seen, but they never stay.

The Sand Martin is a pretty little bird, but unfortunately so infested by a species of insect known as the *Hippobosca Hirundinis*, that an examination of them too closely is almost thereby forbidden, but I know of no prettier recreation on a warm August afternoon than sitting on the river's bank and watching their flitting movements, ever presenting a pleasant variety of scene, and not only pleasant but instructive; their sweet little voices, their agility of wing, their elegance, their delicacy of form, and all their little actions; it really deserves more than the mere word 'amusing' to describe it. I think it is these apparently insignificant pleasures that make up a great mass of our happiness here.

Lincolns Inn Fields, November.

THE LATE FROST.

TO THE EDITOR OF THE NATURALIST.

Sir,

It may be interesting to some of your meteorological readers to know that during the late severe frost the thermometer here did not sink below 18° Fah., according to the register kept by the Scarborough Philosophical Society, and that on the day on which in London it sank to 8° below zero,*

* Vide Mr. Lowe's observations, "The Times," January 5th, 1854.

it stood at 19° at Scarborough. On the same day (January 4th.,) it was noted *at zero* at Hackness, six miles inland, and rather lower at Thornton, sixteen miles inland; at York it fell to 2° below zero. On looking back to the register of former years, I observe that from 1832 to 1840 the temperature was never lower than 20° Fah.; and during the severe winter of 1838, the thermometer on the 19th. of January stood at 30° at Scarborough, 2° at York, and 13° at London! The *proximity of Scarborough to the sea*, its *peculiar position*, and *geological formation*, are influences, operating conjointly with other causes, which prevent great extremes of temperature, and contribute to produce that *equability of climate* alluded to by Professor Dove, in his paper on "the Distribution of Heat," at the late meeting of the British Association.

R. BARRINGTON COOKE.

Scarborough, January, 1854.

Miscellaneous Notices.

A Cat (Felis catus-domesticus,) *with many Toes.*—In the Wells Brush Factory there is a black female Cat with twenty-eight toes, arranged in the following manner:—on each of the fore paws there are eight, and on the hind ones six. But what is more remarkable still, is that she has had four lots of young ones, all of which were endowed with more toes than common. She has two pretty kittens with her now, about a month old, and one of them is the owner of twenty-five, and the other twenty-seven toes. It is very probable that if these monster-clawed Cats were prevented from breeding with those with less talons, their toes would increase to a certain number rather than diminish.—MICHAEL WESTCOTT, Wells, Somerset, December 12th., 1853.

A White Hare, (Lepus timidus.)—A perfect Albino was shot on the estate of Thomas Sibbald, Esq., R. N., of Trebarrow, near Dolsdown, Cornwall, about a fortnight ago, by Mr. Southby, of Cambridge Terr, Hyde Park, who has had it stuffed, and in whose possession it now is.—C. HAUYNOUGHT, Richmond, Surrey, January 2nd., 1854.

Variety of the Common Hare, (Lepus timidus.)—There is this day, Saturday, exposed for sale at a poulterer's in the London market, a singular variety of the Common Hare, having all the head, with the exception of one ear, perfectly white; the remainder of the body and one ear being of the usual colour.—JAMES GARDNER, 29, Great Marlborough Street, November 12th., 1853.

Glossy Ibis, (Ibis falcinellus.)—A specimen of the Glossy Ibis was shot in October, in the Harbour near Christchurch, and is being preserved by Mr. Hart, of that place.—Idem.

The Brambling (Fringilla montifringilla,) *at Preston.*—On the 26th. of December, 1853, a large flock of Bramblings was seen here, of which one was shot.—J. W. ECCLES, Leyland, near Preston, Lancashire.

Rare Birds near Plymouth.—On the 9th. of the present month, a fine specimen of the Gray Shrike, (*Lanius excubitor*,) was killed near Plymouth, and sent to Mr. Bolitho for preservation. I examined the contents of its stomach, and found some feathers, bones, and an entire leg and foot of a small bird, but could detect no remains of insects: the Gray Shrike is very uncommon in this locality. During the late severe weather two of the Common Bittern, (*Ardea stellaris*,) have been obtained in this neighbourhood.—JOHN GATCOMBE, Wyndham Place, Plymouth, January 16th., 1854.

Hooded Crow, (Corvus cornix,) *in London.*—On the 27th. of December I saw a Hooded or Royston Crow on the National Gallery; it seemed to me to be rather a strange position for this denizen of the north, but I knew the bird too well, from having seen numbers of them in Norway, to be mistaken.—C. HAUYNOUGHT, Richmond, Surrey, January 18th., 1854.

The Redbreast, (Erythaca rubecula.)—With much truth it may indeed be maintained, that this dear little English songster is a daily ministrant to our pleasures, for I have very carefully made it an object of study; and even during the period of moulting I find the same bird will not, in individual instances, desert its habitat. On the whole (speaking of the body of Redbreasts,) I will not maintain that they are true to their haunts; but this I know, that upwards of a score of these "Sacred" birds, in various localities known to me, have for the whole year been very faithful in retaining only one and the same dwelling-place: they have never, even for a day, deserted their location, even in the moulting season; but true and dear, have been welcome visitants; and evinced as much tameness as in the winter;—hence this attachment to a particular spot has enabled me to mark their song; and I discover that the months, May and June, are those in which we hear them the least; though even then the birds sing gaily at noon to their broods. Late in August and in September, the Robin certainly is very sweet, I think as sweet as at any time; for our gardens being then destitute of small fruits and seeds, he appears at once to seek our doorways and windows, and beg for food. The contrast from perfect silence to rich but solitary music is great; for in September, we seldom hear any birds but the Window Swallow early in the morning, or at the evening twilight, and the Lark from eight A. M. till noon, except the Redbreast, and he scarcely passes an hour without a flood of song. I hear him as early as five A. M., and as late as seven P. M.; and as I listen I am insensibly drawn into a train of very grateful reflection, to find the favour of our God so pleasingly portrayed as it is, in never deserting the great page of Nature, for a record of himself is ever found there; and the Redbreast with its never-ceasing song, is one of the plainest illustrations to me.—G. R. TWINN, Bawburgh Hill, near Norwich, February 9th., 1854.

Note on the Wren, (Troglodytes Europœus.)—Hunting the Wren on Christmas Day has been a pastime in the Isle of Man from time immemorial. "It is founded on a tradition that a syren fairy once upon a time infatuated the warriors of Mona, and by her charms decoyed them into the sea, where they were drowned. She had thus well-nigh stripped the country of its chivalry, when a knight sprang up so bold and artful, that he had certainly compassed the death of the enchantress, but that she escaped by taking the form of a Wren. The knight cast on her a spell by which she was compelled on every Christmas Day to appear in the same form, with the definite sentence that she should ultimately perish by human hands. From that time to this, once every year from dawn till even, men and boys, with bows and arrows, sticks and stones, pursue, pelt, and shoot the whole family of Wrens, in the hopes that the fairy one may thus fall by their hands. The feathers of the slain are craved as charms to preserve mariners from shipwreck, and many a Jack Tar conceals them in his bosom. The sport ended, the supposed witch-Wren is, on St. Stephen's Day, affixed on the top of a pole decked with evergreens and bows of ribbons, and as the sportsmen march through the town in marshalled triumph, and amid the blowing of horns, they sing—

"We 'll away to the woods, says Robin the Bobbin,
We 'll away to the woods, says Richard the Robin,
We 'll away to the woods, says Jacky the Land,
We 'll away to the woods, says every one.
What will we do there? says Robin the Bobbin, etc.
We 'll hunt the Wren, says Robin the Bobbin, etc.
Where is he? Where is he? says Robin the Bobbin, etc.
In yonder green bush, says Robin the Bobbin, etc.
How can we get him down? says Robin the Bobbin, etc.
With sticks and stones, says Robin the Bobbin, etc.
He 's down, He 's down, says Robin the Bobbin, etc."

The sport is now (1853,) pursued by the boys, merely for the sake of the few pence to be realized from the exhibition, and the sale of the charmed feathers."—Zuiggin's Illustrated Guide to the Isle of Man.

I have known many Wren's nests in hedges, usually in brambles, four or five feet from the ground; also one in a hole in a barn wall, where the scaffolding pole had been fixed; and several placed against the trunks of trees, as high as twelve feet. I am told Wrens are infested with vermin.—In a letter from James Croome, Esq., to the Rev. F. O. Morris. Douglas, 1853.

Gray Phalarope, (Phalaropus lobatus.)—A bird of this species was shot at the mill-pond, Bagshot, Surrey, by Mr. John Mears, Junior, on the 25th. of September, 1845, and sent to me, and I preserved it, but very indifferently; and it has since been re-stuffed by Mr. John Cooper, of Radnor Street, St. Luke's. This is the third specimen I have met with in that neighbourhood, one of the two others formed part of the collection of Mr. John Wheeler, of Wokingham, but I do not know what became of the other. These birds are nowhere common, and the Red-necked Phalarope, (*Phalaropus Hyperboreus*,) still less so.—O. S. Round.

Note on the Blue Titmouse, (Parus cæruleus.)—A Blue Titmouse always perched in the spout of a pump on our premises at Walsham Hall, which our gardener at last secured for me, at my request, and I caged it; and singular to say that it could never perch on the stick in the cage, but always at the bottom, from which I concluded that always being used to sleep sitting in the pump spout, it could do so only in that posture. It was remarkable a bird like that should take to such a cold roosting-place, was it not? A very fine male specimen of the Hobby Hawk has occurred here. Also I must tell you that not long since on the lawn at Walsham Hall, a snow-white Rook was seen amidst a flock of the natural-coloured ones: it was never seen again.—J. Wilkinson, Walsham Hall, in a letter to the Rev. F. O. Morris.

Anecdote of a Robin, (Erythaca rubecula.)—A few weeks since a Robin had been living in our greenhouse for a month, upon, I suppose the insects it found on the plants. Our gardener at Walsham Hall, on heating the flue in the greenhouse, saw this Robin flying about, and upon going out (it was a very cold night) the Robin flew out and lit upon the vine just outside, and wanting to go home, he shut the door and left the Robin perched on the vine. Next day he looked for it on the vine, and it was dropped off the tree, and dead; it was from the extreme heat of the greenhouse and the intense cold which killed him. Also during this severe weather a Robin lived in our house, and although driven out nearly every morning by the domestics, it would not quit us, and still lives with us partially though not so constant during the thaw as when the frost bit him.—Idem.

Early occurrence of the Stone Curlew, (Œdienemus crepitans,) *near Hull*.—As an instance of the early occurrence of the Stone Curlew may be of interest to you, I write to mention the fact that I have in my possession a specimen which was shot in the first week in February, 1852, at Roos, in Holderness. I believe it is very seldom that they are seen so early as that. —T. W. Stears, Coltham Street, Hull, in a letter to the Rev. F. O. Morris, January 23rd. 1854.

Red-breasted Merganser, (Mergus serrator,) *near Richmond*.—A fine female Red-breasted Merganser was shot near this town on December 12th., and was preserved by Mr. F. Ableson, at whose house it may now be seen.—H. Smurthwaite, Richmond, Yorkshire, January 16th., 1854.

Little Auk, (Alca alle,) *at Harrogate*.—A fine specimen of the Little Auk was taken at Harrogate on the 10th. of January. The bird was observed by a blacksmith running about in his yard, and he easily captured it by walking leisurely to the bird, and taking it up in his hand. This 'knight of the smithy' never before having seen so queer a little web-footed thing, thought of his pump, and to plunge it into the trough in order that he might see if he was a swimmer. The Auk being placed in his trough instantly dived, came to the surface, shook its feathers, and courted the ruffled water with its side as it might have done on the ocean. The bird was fed and retained a short time alive by a person living at Harrogate, who purchased it for two shillings; but as it was supposed to shew better in a stiff form inclosed, the little stranger was deprived of life, and it is now set up and looks very well. By information I received, the Auk became quite domesticated, and ran about the room in which it was lodged, stopping at times to preen its feathers. It seemed a solitary little visitant to the bleak region of Harrogate Common, far away from home; the severity of the weather having driven it to seek food inland, in a country where ponds and lakes are not abundant. I have heard of several Auks at different times being shot flying with other birds, but one so tamed by starvation and cold as to accept the offer of a hand to its own destruction is worth remarking. More winterly was that hand to it, poor creature, than the hard midnight frost fastening its tiny feet to the frigid grasp of hyemal greeting—the earth-covering snow.—C. W. Rothery, Harrogate, January 13th., 1854.

The Retrospect.

The Wagtails.—If you can afford me a small space in the "Retrospect," for next month, I will endeavour to reply as concisely as possible to Mr. Round's answer to my remarks on his paper on the Wagtails. I never said or implied that the Pied Wagtail was not the *Motacilla alba* of the authors to whom he refers me, nor can I allow him to include Linnæus in the list, as I believe he refers to the Continental Wagtail; but I contended the *M. Yarrellii* of the present day was the old *M. alba*, and that the term *alba* had been applied by modern ornithologists to the Continental Wagtail, with I believe ample grounds for the change. My observations on the plumage of the Pied Wagtail lead me to a conclusion in direct opposition to Mr. R. I have examined hundreds of specimens since I last wrote, and have not been able to see a black-chinned one amongst them; I am confident if Mr. R. were to obtain any number of specimens in their winter plumage, he would find a proper proportion of them give, on dissection, internal evidence of their being males. I am equally confident that the summer plumage is the same in both sexes, and that the male is only to be, and may easily be, distinguished from the female by his much deeper black markings. On referring, as requested by Mr. R., to page 128, vol. ii. of Mr. Morris's beautiful work, I find he says "It sometimes aspires to a pleasant modulation which may almost be dignified with the name of a song;" no very strong authority against my opinion; but let Mr. R. refer to the same work, page 103, vol. ii., he will find much stronger evidence against his opinion of the song of the Swallow.

Mr. R. says he has obtained specimens of both the *M. alba* and *M. neglecta*, but being "no naturalist," never "dreamed" that the former was anything more that a fine Pied Wagtail, and the latter the young of the Gray Wagtail, whose existence he appears to doubt in his original paper, and in which only two other species are named, or the female of the Yellow Wagtail; surely, if he had been wide awake he would not have placed such opinions in opposition to those of Mr. Yarrell, Mr. Gould, and a host of others who are naturalists, and whose opinions are always looked on as sufficiently conclusive for any observations they make on Natural History. I must now decline any further discussion on this subject, as I think the pages of "The Naturalist" may be better filled than by a controversy by two persons who are not naturalists; and I see no hope of convincing, in fact it would be presumption in me to hope to do so when the highest authorities fail.—Stephen Clogg, Looe, January 11th., 1854.

Can your correspondent, J. Longmuir, Esq., Jun., be really serious when he asserts that the Starling, *(Sturnus vulgaris,)* for the purpose of breeding, sometimes "chooses high trees, in which *it excavates a deep hole?*" (see "The Naturalist," vol. iii., page 220.) If he be really serious, and if his statement be correct, the Starlings, which breed in the neighbourhood of Aberdeen, must surely differ very widely in their structure and organization from those which are to be met with elsewhere; they must, one would imagine, be furnished with the stiff, whalebone-like shafts to the feathers of the tail, which characterize the Woodpeckers, to enable them to poise themselves against the trunk of the tree, in order to commence operations; their feet and claws must also necessarily undergo considerable modification; they must moreover be furnished with the powerful, wedge-shaped beak of the Woodpecker, to enable them successfully to accomplish what they have begun. Would Mr. Longmuir be obliging enough to procure a specimen of the Aberdeen Starling, and favour the readers of "The Naturalist" with a description of the beak, feet, tail, etc.? we should then see in what essential particulars they differ from the common sort. That Starlings do breed in holes in high trees, and low trees, and trees of intermediate height, is well known, but it is in holes previously excavated by the Woodpecker tribe, not in holes excavated by themselves. They may possess strength of beak sufficient to enable them to remove particles of soft, decayed wood, so that when this kind of wood presents itself in the hole chosen by them, they may perchance enlarge that hole, if it should not have been found sufficiently large for their accommodation previously; but for the general purposes of "boring" or "excavating," the beak of this species is by no means adapted or powerful enough. We can give full credence to the fact that Starlings breed in the holes of trees in the neighbourhood of Aberdeen, but I imagine Mr. Longmuir must have taken it for granted that they excavated the holes themselves. Now it would be well in ornithological, as in many other matters, not to take anything for granted; we should thus avoid the danger we must otherwise be constantly in of mis-stating facts.—S. Stone, Brighthampton, October 6th., 1853.

The Querist.

Query as to the Red-backed Shrike depositing its egg in other birds' nests.—Would you be kind enough to inform me whether the Red-backed Shrike, *(Lanius Collurio,)* ever lays, like the Cuckoo, in other birds' nests; for an egg has been brought to me very similar to that bird's egg, which was found in a Hedge-Sparrow's nest, and the next day the nest was brought to me with a Hedge-Sparrow's egg in it, pecked in at the top and sucked clean. If you could give me information on this subject I should be greatly obliged.—Fred. W. S. Webber, Callipers Hall, Rickmansworth, Herts.

We imagine the explanation of the above fact to be that a female Shrike, as many birds will do, deposited her egg in the Hedge-Sparrow's nest, her own not being ready for it. The sucking of the Hedge-Sparrow's egg afterwards may have been by a Jay or Magpie.—B. R. M.

In answer to a question which appeared in "The Naturalist" of last month, regarding the autumnal breeding of the Wood Pigeon, *(Columba palumbus,)* I beg leave to inform your correspondent that I found a nest of this species in Hulne Woods, near Alnwick, during the last week of October, 1853, containing two young ones. They appeared to be about a fortnight old.—William Armstrong, Alnwick, February 3rd., 1854.

In answer to George Hodge's, Esq. inquiry, in connection with finding "five white eggs, about the size of a Yellow Hammer's," I have just met in Part xxxiv. of "Meyer's British Birds," now issuing, that "he has specimens of the Eggs of the Yellow Buntiug, *(Emberiza citrinella,)* of a spotless milk-white, and others plain stone-colour, without any spot or line whatever." I myself have a perfectly white egg taken from a Yellow Hammer's nest, but the surface "is not highly polished," but very rough and uneven, which I have thought resulted from the age of the bird perhaps, in connection with some peculiar disease. The Wryneck I believe usually selects elevated spots for nidification, as hollow or pollard trees, etc.—G. R. Twinn, Bawburgh Hill, Norwich, February 9th., 1854.

Are the eggs mentioned by G. Hodge, Esq., in "The Naturalist," vol iv. page 46, those of the Blackstart, *(Sylvia Tithys?)*—Henry Buckley, Calthorpe Street, Birmiugham, February 2nd., 1854.

We ventured on the suggestion that they were the eggs of the Wryneck, having more than once heard of its selecting a similar situation for its nest in the North of England, near York. —B. R. M.

Preserving Birds and small Quadrupeds by means of Ether.—Has any reader of "The Naturalist," ever used *ether* in preserving birds and quadrupeds. If so, I shall feel obliged by any remarks from them, as I am now engaged in conducting a series of experiments with it *(ether.)* The results of which will be laid before the readers of "The Naturalist."—J. Mc'Intosh.

In "Patterson's Zoology," he makes mention of a purple dye, which makes an indelible marking-ink, found in the Dog-whelk, *(Purpura lapillus,)* which I take to be what is sometimes called the Horse-whelk, the colour of which varies from white to light straw. What I wish to know is how to obtain the dye contained in a whitish coloured vein close to the head; is it by bruising the whole animal, or how?—R.

I do not know whether there is any person in London, or elsewhere, who keeps Cabinets, etc., for collections of insects. and other objects of Natural History, ready-made for sale, but if not, I think it very desirable that there should be some such general repository, exclusively devoted to the sale of such articles, where all kinds of needful articles for the purpose might be kept. But I more particularly desire to observe that it would be a great advantage, and as far as I know, a new feature in any such establishment, to have the cabinets, etc., with labels all ready put in them, cut out of the most approved lists; and also cases for birds of all proper sizes ready papered and with labels, etc. This would promote a sale, and so remunerate the vendors, and a world of time and trouble would be saved to purchasers.—F. O. Morris, Nafferton Vicarage, Driffield, December 13th., 1853.

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MR. FOXCROFT begs to return his sincere thanks to the Trustees of the British Museum, the Nobility, Gentry, and Clergymen, and the Members of the Entomological Societies, for the patronage he has received for a number of years; and takes the liberty of informing them and others, that he intends collecting Insects during the whole summer of the present year, (1854,) in the best locality known in Scotland, which is round the Black Forest, Rannoch, Perthshire; commencing on the 6th. of April, and collecting for six months.

Mr. F., to enable him to carry out this plan, wishes to raise a sufficient sum by Subscriptions of One Guinea; each Subscriber to be entitled to one specimen of every species collected during the season, which will be equally shared in November, on his return, by himself. Those Subscribers who are Coleoptera-collectors, will have all the choice and rare Beetles divided amongst them in the boxes; and those who are collectors of Lepidoptera, will have all the rare and best specimens of Moths and Butterflies divided amongst them. The specimens will be sent to the residences of the Subscribers; and the boxes containing them are to be returned or paid for.

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THE NATURALIST;

A POPULAR MONTHLY MAGAZINE,

ILLUSTRATIVE OF THE

ANIMAL, VEGETABLE, AND MINERAL KINGDOMS.

WITH NUMEROUS ENGRAVINGS.

CONDUCTED BY

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NOTICES TO CORRESPONDENTS.

Communications have been received, up to April 18th., from S. Hannaford, Esq., Jun.;—R. Gray, Esq.;—W. Webster, Esq.;—W. Felkin, Esq.

Contributions have been received, up to April 18th., from H. C. Stuart, Esq.;—Mr. E. Parfitt;—Mr. T. Edward;—J. Mc'Intosh, Esq.;—Rev. G. Sowden;—Rev. R. P. Alington,—Mr. C. Jackson;—J. Longmuir, Esq., Jun.;—Rev. R. A. Julian;—H. Smurthwaite, Esq.;—L. Shields, Esq.;—G. Hodge, Esq.;—C. M. O.;—T. Kirkham, Esq.;—J. H. Davies, Esq.;—C. H. Dashwood, Esq.;—S. Stone, Esq.;—Miss I. Gifford.

W. Webster, Esq.—A work such as you allude to, would be extremely useful, and is at present a *desideratum*. We fear no publisher could be found who would risk the expense of bringing out such a book.

We beg to call the attention of our readers to "A Practical Naturalist's Exhibition, in the Victoria Gardens, Bury, Lancashire," which will take place in the present month, (April.) The exhibition will consist of specimens of preserved Quadrupeds, Birds, Reptiles, Insects, Shells, etc.; also of live Birds. These will be sent by all the practical Naturalists of the district, about eighty of whom met at Bury in December, to arrange the preliminaries. A small sum will be charged for admission; and any surplus, after paying the expenses, will be divided among the exhibitors, who are all, we believe, mechanics. We shall be glad to hear that the exhibition proves successful. Mr. G. Booth, of Bolton Street, Bury, occupied the chair at the preliminary meeting.

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M.D., Driffield;—Books for Review, and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row. London.

HABITS OF THE FOX, (*VULPES VULGARIS.*)

BY A. S. MOFFAT, ESQ.

Although many wondrous tales are told about the cunning and sagacity of the Fox, some no doubt true, others fabulous, I trust that the following account of the manners and habits of one which I kept upwards of two years in confinement, may not prove uninteresting to the readers of "The Naturalist."

In the spring of 1838, the woodman at Beanley Plantation discovered the breeding-earth of a Fox, at the mouth of which he placed a trap, and caught the old bitch; and afterwards, with the assistance of two or three neighbours, dug out the young cubs, five in number, about the size of half-grown Rats, and covered with dark brown fur. I became possessed of one of these, which for several days at first was very discontented with its new situation, and kept almost constantly calling out in a sort of quick yelping bark. It however lapped milk readily, and soon became reconciled, and so tame, that until it was twelve months old, it had its liberty about the dwelling-house the same as a Dog, which in many points of character it closely resembled.

When more than half-grown, it used to follow me about the garden and village, and frequently made little excursions amongst the cottages by itself, popping into the houses to investigate their larders, to the no small terror of the old women, who regarded it with as much admiration as a Yankee regards the Skunk; and frequently have I seen them to my no small amusement, endeavouring in vain to drive him out with a broom, but Reynard, not to be ousted in this manner, would contrive somehow or other still to pop past them with the most impudent effrontery imaginable; and not leave the house, in spite of every friendly invective, until it suited himself.

At this period of its life, it did not seem to evince that extreme distrust towards strangers which was so strongly marked when it arrived fully at maturity; nor did it seem ever to desire at that time to resume its native habits; while its affection for all the members of our own family seemed to be even stronger than is generally witnessed in Dogs. Every night while it remained as an inmate of the dwelling-house, it slept upon a mat at the foot of the staircase in the passage; and as each member of the family came down in the morning, it used to meet them half-way, and express its joy by leaping against them, and uttering a sort of hoarse scream, much after the manner of an affectionate Dog, and fanning its tail in the same way; only the expression of its satisfaction seemed more extravagant.

When nearly full-grown, Reynard's natural predilection for poultry manifested itself one day, with his being met by the servant carrying in his mouth a Turkey hen, which he had abstracted from her nest in the yard, for which act of felony he was ever afterwards confined by a chain in a grass area behind the house, with a Dog-coop for shelter. This house, made by man, he very seldom inhabited, and preferred a hole of his own digging which he generally lay in. His confidence and affection for every member of our own family was never in the least impaired by his confinement, but his

BRITISH MUSEUM NATURAL HISTORY.

disposition towards strangers was much altered; he seemed now so distrustful and suspicious of any one with whom he was not acquainted, that his eye was never for a moment removed from them, so long as they were in sight; he watched them with the most intense attention, and on their approach ran into his hole, from which it required great force to drag him. On the other hand, if any of ourselves went towards him, he would bound to meet us at the stretch of his chain, so as almost to strangle himself, uttering at the same time a peculiar hoarse scream indicative of satisfaction, which was the only vocal sound I ever heard him use. I have even seen him leave his meal to welcome my youngest sister, who was an especial favourite; and what was most singular in an animal naturally so wild, he would allow me to open his mouth, place my fingers in it, even extending to the throat, as often as I pleased, without once attempting to bite. I could also at any time take him up in my arms—liberties I should not like to take even with the quietest Dog.

A remarkable trait in his character was his fondness for the society of Dogs; he would pull at the chain till half-exhausted to get at them, no matter whether strange ones or not, and on their approach, he began fanning his tail, whining, laying back his ears, smelling at their mouths, and betraying other signs of a desire to play with them. I have seen him for hours gambol with a Terrier bitch I had, as also with many strange Dogs; and, what was equally singular, I never saw any Dog manifest the least dislike or ill-nature towards him. The woodman had at that time a strong Terrier celebrated for killing vermin, and I have seen this Dog go forward, smell at him, and then turn quietly away.

I will here notice a point of dissimilarity in manner between this Fox and Dogs in general, which, though trivial in itself, serves to indicate a difference of disposition; it will be remarked that when two Dogs meet, (strangers to each other,) it is their invariable habit to smell at each other's anus, while the Fox always snuffed at the mouth. I kept this Fox between two and three years, when, having slipped his collar, which he sometimes did, and taken to a neighbouring wood, he was fallen in with by a pack of Harriers, and killed, much to my regret.

Many strange anecdotes are told of the Fox feigning death in order to escape from his persecutors, but the following authentic instance which happened at Wooperton, is as strange as any:—It happened a few years ago, that the gamekeeper caught one in a trap, which was taken home to be worried by Terriers; this having been done, the Fox, to all appearance dead, was taken to the farm-house to let a lady see it, who had expressed a wish to examine it. Reynard, who had either been duping his persecutors all the while, or revived again from his contest with the Terriers, no sooner found himself quietly laid out for inspection in the back yard, than he immediately bounded to his feet and made off, to the no small consternation of the spectators.

Beanley, Northumberland, January 17th., 1854.

RARE ANIMALS, ETC., OCCURRING IN ABERDEENSHIRE.

BY J. LONGMUIR, ESQ., JUN.

(Continued from Vol. III. page 219.*)*

The Otter, (Lutra vulgaris.)—This "aquatic Weasel" is gradually disappearing from our county, and from Scotland. Although Otter-hunting, which was a favourite *field* sport with our ancestors, is now very seldom carried on, except in some of the islands of the Hebrides, where the nature of the *ground* renders the sport very exciting, a feeling of hatred to this much-persecuted animal is still kept up, especially among the country people, and no opportunity of killing an Otter is omitted. The caution (in the Zoological Gardens, where an excellent opportunity of watching its peculiar habits is afforded,) "Beware! the Otter bites!" is a very useful one, for its ferocity is very "highly developed." The obstinacy and pertinacity, too, which it exhibits when attacked, are remarkable; and yet, notwithstanding its natural disposition, the Otter displays considerable intelligence, and may, when taken young, be tamed without much difficulty. This is practised to some extent in various parts of India, where a number of Otters may frequently be observed fastened by means of long strings to stakes near the edge of the water, in which position they are very useful, both for driving fish into their owner's nets, and for seizing and bringing out the larger individuals. The Otter claims to be ranked as one of the "ancient inhabitants" of this land, its bones in various caverns, such as Kent's Cave, Devon., fully certifying its existence in England many ages ago. Three or four young Otters were lately obtained within a short distance of Aberdeen; and now and then, at various intervals, intelligence of the capture and consequent destruction of some fated individual is conveyed to us. There is a variety spotted with white sometimes seen in this and some of the neighbouring counties, which the Scottish peasantry call the "King of the Otters," and which they consider to be an individual of such importance, that, according to the current tradition, this "King" is never killed without the sudden death of some other animal, or even of man himself.

Death's Head Moth, (Acherontia Atropos.)—When we behold some gaudy butterfly we are filled with admiration; when we examine with minuteness some dull-looking moth we are often astonished at its beauty and perfection; yet when we see the figure of a human skull—"the emblem of death and the grave," distinctly painted in characteristic colours on a ground of dark brown, and on the thorax of a dingy-looking moth, we are inclined to feel some degree of aversion, if not of horror. The Moth, which carries about with it the symbol of death—in itself a true *memento mori*—seldom strays so far north as our "granite city;" but in the winter time, (1853,) as two boys were playing about some logs of wood near the ship-building yards of Footdee, they observed a very large Moth—and well might they think it large, for I believe it is one of the largest Moths in Europe—fluttering

about; and after considerable exertion they managed to secure their prize, and to bring it, considerably mutilated however, by *its* endeavours to escape, and *their* awkwardness, to Mr. Alexander Mitchell, who recognised the insect as the "Death's Head." It struggled hard for liberty, and squeaked *horribly*, displaying strength much greater than an ordinary Bat. At last it gave in, and is now ranked among the *spolia opima* of Mr. Mitchell, and the Lepidoptera of Aberdeenshire.

Aberdeen, January, 1854.

THE HOUSE SPARROW, (*PASSER DOMESTICUS.*)

BY J. MC' INTOSH, ESQ.

I AM well aware that my present subject is rather inclined to be noisy, and at times rather thievish, but there are few of us who are the least inclined to balance the evil with the good. Well knowing that such is the case, I will, in the present communication, show, or endeavour to show, or convince those who are inclined to deal death and destruction around them, from ignorance and prejudice, that the humble Sparrow is not quite so bad as some writer has been pleased in the following lines to designate him:—

"Thievish and clamorous, hardy, bold, and base,
Unlike all others of the feathered race.
The bully!! of his tribe—to all beyond
The gipsy! beggar!! knave!!! and vagabond!!!!"

This, reader, is a bad and false sentence pronounced upon this bird by one who appear to be totally unacquainted with its true character, and to whom I would say—

"Reasoning at every step he treads,
Man yet mistakes his way;
While meaner things, whom instinct leads,
Are rarely known to stray."
COWPER.

The Sparrow is of the greatest use to the cultivator of the soil; if he was not so, he, like his black persecuted neighbour, the Rook, would not be so generally distributed over most parts of the world. It inhabits most European countries—from the mountain chains of the Alps and Pyrenees, northwards to the Arctic circle. He is not the less abundant in great cities than about the rural homes of our cultivated districts. It has been the fashion of most writers on the history and habits of this bird to brand it as an ugly and vulgar-looking bird, but this is really not the case. Take for example a rustic cock Sparrow, examine his plumage, and, for a moment, consider how much there is in that compact little frame, which would baffle the power of the wisest man to explain.

"He who feels contempt
For any living thing, hath faculties
That he hath never used, that thought with him
Is in its infancy."

Many and bitter have been the controversies which have taken place on the merits and demerits of our present subject. Most writers adopting extreme views; some contending for his total extirpation, and others advocating his protection, and to this we incline. From my own observation there has been a considerable decrease in some of the feathered tribes of late years, from some unknown cause. It would be well for the husbandman to spare but a little food to preserve their lives through the inclement winter, and he will be amply repaid by the protection of his crops from the ravages of insects when spring advances. Laws might be enacted for the protection of birds, but universal opinion would act better than any law. In South America we are informed that the Sparrows were persecuted with such unremitting perseverance, that insects increased to such a degree, that many cultivated lands were so ravaged by them, that it became quite impossible to raise any crops upon them. It is not only in America that a price has been set upon the poor Sparrow's head, for our own enlightened country is, and has been guilty of such wholesale murder from time immemorial to the present hour. We wish it otherwise; however, we hope the day is not far distant when parish subscriptions for the destruction of Sparrows will be discontinued; for such 'Societies!' or whatever their local name may be, only point out the ignorance of their members, for that portion of grain or fruit taken from them was intended by the Great Creator of All for the birds for the benefits they confer upon man, that selfish biped who considers himself 'lord of the creation;' but let him remember in his ignorance that for all his misdeeds he will one day have to answer.

"For not a Sparrow 't will be found,
Without His will falls to the ground,
Who high above reigns o'er us."

That the Sparrows do eat grain, and at times to a considerable extent, no true naturalist will deny; but we never, as yet, have heard of a farmer or gardener being ruined by them, as some of their enemies have almost asserted; but it is well known that whole fields of grass and grain have been destroyed by one single species of insect, and that farmers have lost hundreds of pounds by them in a season. That the Sparrows are the wholesale destroyers of our crops, that some writers represent them to be, is not correct. Let such watch them during the period of incubation, when they are most voracious, and no better locality for such can be selected than a farm-steading or farmyard, surrounded with hedge-rows, stretching away towards a wood, etc. The Sparrow will be seen to fly out of its nest with a rapid and bounding flight, and after scouring the hedges, he returns with a caterpillar or some other insect-enemy in his bill, and is welcomed home with a chorus of sweet chirpings, and so on for many a long hour in the bright days of spring and summer, when there is not an atom of grain for him, watching over the wants and comforts of his offspring till they are able to fly and provide for themselves, with a zeal and affection that would put many a christian to the blush.

A single pair of Sparrows having young to maintain, will destroy upwards of four thousand caterpillars in one week. Now, what would these four thousand caterpillars destroy in one week of the food of man? Supposing that three thousand of these caterpillars alone arrive to perfect butterflies and moths, and lay their eggs, why we should be overwhelmed with a more serious pest than the poor House Sparrow, which we could neither shoot, trap, or poison! Who, I ask, has not observed the persecuted Sparrow dart upon that all-destructive pest to our cabbages, etc., the Common White Butterfly, while seeking a favourite spot to lay her eggs, which are to produce voracious caterpillars per the thousand. It is not only the insect world on which the Sparrow feeds, but we have watched them in fields of young wheat, and other agricultural crops devouring snails and slugs; and it is quite amusing to watch them hammering away at the shell of a snail, similar to the Thrush and Blackbird, till they have reached their prey. Watch them again in a field of beans, cleaning that important crop of *Aphides*. Again, who has not observed them pulling the thatch out of the roofs of cottages during winter? what is this for? not for mere wanton mischief, as is generally supposed, but for the myriads of flies which are quartered there for the winter, to issue out, in the summer to annoy us, our cattle, to pollute our food, and otherwise to become an intolerable nuisance. The Sparrow frequently attempts the capture of insects on the wing, but with poor success. Nature never intended him to catch flies on the wing; though the hunting of butterflies by Sparrows trained for the purpose, is said to be one of the royal sports in Persia.

No sooner do the leaves of the hawthorn appear, than the Sparrows may be seen to hunt the hedge-rows for insects, even before they have young ones. We have watched them in large rose quarters in nurseries and gardens, and on roses trained against walls and houses, clear them of every *Aphis*. A long series of observations induces me to assert, which I do without the least fear of contradiction from those acquainted with their real habits, that the Sparrow prefers insect food to all other when he can procure it; in fact, many of their summer haunts are chosen with reference to a supply of such food. What we have here advanced is with reference to the rustic Sparrow. The town Sparrow is differently situated,—they are obliged to pick up all the nutritious particles from the streets, roads, yards, and dunghills. Who has not observed them hopping about the streets, picking up the filthy cereal fragments which have been swept from the shops, imbibing from their infancy that boldness and carelessness, which are so conspicuous in the character of a town-bred Sparrow. Indeed, nothing can exceed the self-complacence of the town Sparrow. You see him build his nest, and rear his young, amongst the richest tracery of a church-roof or window; within the very coronet or escutcheon set up over gate of hall or palace; nay, he would build in the Queen's crown itself, if it were placed conveniently for his purpose.

Perhaps by this time many of my readers will say hold hard Master Mac, —you are only looking at one side of the question. Well Sir, for the other

side; and as a cultivator of the soil from my cradle, I, without the least fear, pronounce them to be far more serviceable than injurious; and am convinced that in gardens a few white threads, with feathers or bits of paper tied and suspended, so as to dangle over the beds, will prove effective in scaring them away; for with all their impudence they are exceedingly wary and fearful of danger; while netting is effective in the preservation of all fruit trees. To accuse the Sparrow of nibbling off the buds of trees, etc., for food, is a most mistaken idea;—they do nothing of the sort. They are also accused of plucking off the flowers of auriculas, polyanthuses, etc., and even to diet upon the petals of the dahlia. Has it never occurred to those persons who thus accuse them, that it is insects they are in search of, particularly that destructive pest, the common earwig; for this service the poor Sparrow is denounced as the destroyer of their flowers, while the real enemy is hidden from their sight. In gardens the gardener is in nine cases out of ten himself or his employers to blame, as there are innumerable devices without the aid of poison, traps, or guns. The farmer is differently situated, he cannot cover his fields of seed, but with the use of a little powder and a boy, he may effectually guard himself, without dealing death and destruction around him.

We should bear in mind that the injuries we receive from birds are direct, and the benefits indirect, which leads many of us to decide against them; we, therefore, should carefully investigate their habits before we proceed to take away that life we cannot give. As we have before said in our remarks on the persecuted Rook, that man is justified in protecting his crops, but he should act discriminately; for, let those societies for killing Sparrows beware, lest when they find their seed crops in the jaws of a more deadly enemy, which they can neither shoot, trap, or poison, they may wish that they had paused in their work of destruction, and left a few of their poor enemies, the Sparrows, to rid them of the pest. To such societies I would most seriously suggest the following *Motto:*—

"No birds that haunt my valley free,
To slaughter I condemn;
Taught by the power that pities me,
I learn to pity them."

5, *Middle-Street, Taunton, February 6th.*, 1854.

A FEW REMARKS ON THE WOODCOCK, (*SCOLOPAX RUSTICOLA.*)

BY THE REV. R. ARCHER JULIAN.

This species has been more than usually abundant here this season.

From the 5th. to the 12th. of October a few are invariably to be found on Dartmoor amongst the heath and dead ferns near the tors, probably the first land of seeming security which they perceive on their arrival in this

locality. Here they recruit their strength. I more particularly observed this to be the case, whilst staying with a friend during the present season, in the vicinity of the moor. If a Woodcock was shot at the commencement of the day very light, and with its breast-bone, as he remarked, "keen as a razor," a good day's sport was prognosticated, as he immediately conjectured a flight had arrived, which invariably proved to be correct. Now we know that although all birds living after the manner of the Woodcock, have very quick powers of digestion; yet to reduce them to such a state as this, they must have been very many hours deprived of food, and thus we may surmise have come a long distance. Two or three days, however, serves them to regain their accustomed plump condition, though what astonishes me much, is, that no one seems in that neighbourhood ever to have seen them arrive; thus they must have come during the night, though how they can manage to hit the time seems marvellous.—Do they migrate at a great height, and keep on the wing until the shades of night allow them to drop down unseen, and in security? This is probably the case, at least with some, which are found at that period in the streets of a town or a high-road. Even the Nightjar, so ably treated of by that admirable observer of Nature, White, of Selborne, is not more punctual in its evening flight than this bird. Many are the times I have waited in some noted spot for it to pass;—a glade formed at the top of a vale by a few straggling oaks or firs are almost certain to entice it to wing its way amongst them.

The habits of this bird lead it, as soon as the Blackbirds and Thrushes have retired to rest in the hollies and thickets, and have uttered their last sharp notes for the night, when a certain darkness seems to drop over the earth for about ten minutes, so as to render small objects undistinguishable on the ground at the distance of twenty yards, to leave its day resort, and fly to some moist ground or swamp in the open, and there spend the night in searching for food, again returning to its place of security during the same light in the morning. This I have frequently proved to be the case when eager to secure a bird, by shooting at one of an evening without success, and getting to the place by the same light in the morning, I have invariably seen it retracing its last night's flight. In this locality countrymen recognise the time by the name of "cock-light." As many as a dozen occasionally pass the same spot within ten minutes; and I have frequently observed two in pursuit of each other. I believe all nets, (formerly known as Roading-nets,) used for the capture of these birds are now abolished. The slow ignition of flint-guns having being superseded by the instantaneous discharge of detonators, has rendered the rapid flight of the Woodcock of no avail as regards baulking the sportsman.

By the above remarks I do not mean to say the Woodcock does not also feed in coverts by day, and especially in severe weather, when they all quit the hills for the unfrozen alder-beds and warm springs. I frequently noticed last season the fallen oak leaves disturbed in patches for some yards where

I found these birds, and was at length highly gratified, whilst peeping over a bank, in seeing one taking up the leaves separately and passing them, quick as thought, through its beak; thus clearing off the small insects that adhered to both sides. We have had, that I am acquainted with, two nests near here—one, many years since, at Saltram; and the other, more recently, near Callington, Cornwall. In the former, five young I believe were reared, one of which, in scarcely a fledged state, is now preserved in the Museum of the Earl of Morley, and is a striking bird to the eye of a naturalist, though placed near a Fork-tailed Kite and many other rarities, shot by the noble Lord on his estates. The latter I am informed was made on an old moss-grown alder-stump, a few dead leaves being the only preparation; it contained four eggs, one of which is now in the collection of the Rev. C. Bulteel.

My father informs me a bird of this species, which had been pinioned, was kept alive for several years at Widey Court, about three miles from this town; it suffered, however, severely in dry summers, and was only sustained by strips of raw meat, placed in a pan with mud. At other times it managed to shift for itself pretty well.

A most singular formation in the Woodcock is the backward position of its eyes. Here we again perceive the beautiful interposition of the Creator; for were they more forward, as in other birds, no doubt the mud and dirt would be continually getting in them, and thus incapacitate it from thrusting its beak so deep in soft places consistent with its habit, which may be seen from the "borings" visible in the place where it has fed, and the dirt on the base of the mandibles and forehead.

The Snipes, which feed in like manner, have this peculiarity, whereas Godwits, Curlews, and Sandpipers, which take their food on the surface, do not require it. This formation, however, enables it to see but imperfectly directly before it. This season one flew against my breast; and last year another was observed by a friend of mine to knock itself down against a house, and when he came to the spot it was perfectly dead. I have heard my father relate an incident of one flying against a marker, whom he had stationed in a tree, and striking him so severely on the cheek as to draw blood. In brushwood, or wherever the trees are very thick, the sportsman invariably finds it rise upwards, to preserve itself from coming in contact with the twigs and branches. In other situations its sight is keen. The irides are hazel, like those of the Nightjar; probably peculiarly adapted for the twilight, during which time the former obtains the bulk of his sustenance, and the latter wholly. These, however, fade in both instances shortly after death.

Can any naturalists yet discern any marks of distinction on the plumage between the sexes? I once considered the outward web of the first primary being *plain* instead of *spotted* as a certain mark of a male; this, however, I have proved by dissection in several instances to be erroneous. I conclude the brighter redness of the plumage, and the distinctness of the bars on the occiput more to be depended upon, and also that the female is usually larger.

Scarcely do individuals of any species of British Birds vary in size more than these; and I think if a distinction of the sexes by marks on the plumage could be accurately ascertained, it would greatly tend to elucidate this point. Were we in the dark concerning the sexes of the Sparrow-Hawk, how difficult would it be so clearly to trace its changes: may not this be the case with the Woodcock? We hear among sportsmen in this neighbourhood of *"the little red, the large black, the ash-coloured, etc.,"* all probably denoting the bird at various ages, and perhaps also difference of size occasioned by the sex.

The largest of the kind I ever had an opportunity of seeing, is now in a state of preservation at Bolitho's, taxidermist, Plymouth, (by-the-by, any ornithologist who visits this town, and would give him a call, would find an hour or two pass almost inperceptibly in his upstair room, where he has a fine private collection.) This bird was within the weight of a barleycorn of sixteen ounces. Another, shot by my father on the 11th. of January, 1848, weighed fourteen ounces. I think the average weight to be about eleven ounces. The condition of the bird is a very material cause of its weight, for the fat assumes an unusual solidity.

They leave us in the end of February and during March, though a straggler may be found in the commencement of April, at which period I have noted two occurrences.

My chief purpose in making the foregoing remarks is to endeavour to draw the attention of naturalists more particularly to this interesting species, for there is no doubt at present great room for improving the history of the Woodcock.

Laira House, Plymouth, February 3rd., 1854.

A NOTICE OF SOME OF THE BIRDS OCCURRING NEAR RICHMOND, IN YORKSHIRE.

BY H. SMURTHWAITE, ESQ.

I was much pleased with a list of the birds found in the vicinity of Leeds, which appeared in "The Naturalist" a few months ago; papers of this description must be read, I think, with pleasure by every lover of ornithology, for from them he obtains information which no book can afford him. I subjoin a list of birds which occur in our neighbourhood, omitting, of course, those which are everywhere plentiful.

The Osprey, (Pandion haliætus.)—This bird is rare, having only been seen once, as far as I can ascertain, near Richmond. It was, after many unsuccessful attempts, shot, and is now in the collection of a gentleman residing in the town.

The Merlin, (Falco æsalon,) is not very uncommon during the winter months, and a few breed on the Grouse moors, placing the nest among the

long heather; I have once heard of the nest being found in the centre of a field of young wheat.

The Kestrel, (Falco tinnunculus,) is of course very abundant, breeding in all the cliffs about the town, and very frequently depositing her eggs in the deserted nest of the Carrion Crow.

The Sparrow-Hawk, (Accipiter nisus,) is even more common than the last-named species; numbers of eggs and young birds are taken annually.

The Buzzard, (Buteo vulgaris,) is very seldom seen, a pair, however, built their nest in the spring of last year on a crag called the Red Scar, and hatched five young ones; this must, however, be an unusual occurrence, as Mr. Yarrell mentions four as the greatest number of eggs he has ever heard of this species laying.

The Tawny Owl, (Strix aluco,) is not very uncommon, and breeds in some of the fir woods, but, owing to the antipathy in which all the *Strigidæ* are held by gamekeepers, is gradually becoming scarcer.

The Barn Owl, (Strix flammea,) breeds in decayed trees, and in several of the ruins in the vicinity of Richmond.

Two specimens of the Short-eared Owl, (*Strix brachyotos*,) have been obtained during the course of the last month, but I have never heard of the bird having been seen in the breeding-season.

The Long-eared Owl, (Strix otus,) is frequently observed, and as specimens have been killed in the months of April and May, there is no doubt that it breeds with us.

The Carrion Crow, (Corvus corone,) and the Jay, (*Corvus glandarius*,) are exceedingly plentiful, the latter especially so.

The Red-backed Shrike, (Lanius collurio,) is rarely seen, but as my friend Mr. Wood, has in his collection several eggs taken from nests near the town, it is not improbable that it is more plentiful than is supposed.

The Fieldfare, (Turdus pilaris,) is very common in winter; and the Redwing, (*Turdus iliacus*,) is also abundant, although not found in such numbers as the preceding species.

The Ring Ouzel, (Turdus torquatus,) is sometimes obtained in December and January, but the nest has never, to my knowledge, been found here.

The Dipper, (Cinclus aquaticus,) is by no means rare; I saw during the summer of 1853, no less than five nests within a circumference of four miles. The situation in which the nest is placed varies considerably; of those above mentioned one was fixed against the bank of the river, about three feet above the surface of the water, another on a high rock overhanging a deep pool, a third behind a waterfall, where it shot over a steep descent, and the remaining two under the arch of a small bridge. It appears to be an early breeder, as

I have known four eggs to be laid by the 26th. of March.

The Sedge Warbler, (Sylvia salicaria,) is not very common, but its small, clumsily-built nest is occasionally brought me by bird-nesting boys.

The Blackcap, (Sylvia atricapilla,) and Garden Warbler, (*Sylvia hortensis,*) are but seldom seen; and the same may be said of the Lesser Whitethroat, (*Sylvia garrula.*)

The Wood Warbler, (Sylvia sibilatrix,) is found sparingly; but the little Willow Warbler, (*Sylvia trochilus,*) is very abundant, placing its well-concealed nest in a tuft of thick grass, and not unfrequently in a low shrub, or in a clump of nettles.

The Golden-crested Regulus, (Regulus cristatus,) is found in considerable numbers in winter, consorting with the Blue and Long-tailed Tits, but in the breeding-season it is not so commonly observed.

The Wheatear, (Saxicola œnanthe,) together with the Whinchat, (*Saxicola rubetra,*) and the Stonechat, (*Saxicola rubicola,*) is rather scarce; the last-named bird is perhaps the most numerous of the three.

The Pied Wagtail, (Motacilla Yarrellii,) and Ray's Wagtail, (*Motacilla flava,*) may be seen on the banks of every small stream. I have never seen a specimen of the Gray Wagtail, (*Motacilla boarula,*) but it is most probably an occasional visitor.

The Tree Pipit, (Anthus arboreus,) and the Meadow Pipit, (*Anthus pratensis,*) are very plentiful. I have found the nest of the latter species, containing eggs, so late as the 19th. of July.

We have all the Tits in great abundance, with the exception of *Parus cristatus* and *Parus biarmicus.*

The Reed Bunting, (Emberiza schœniculus,) is found in tolerable plenty, placing its nest on the side of a bank near a stream; the nest mentioned by your correspondent in "The Naturalist" for February, which was placed in a similar situation, was most probably that of the Yellow Bunting—a white variety of the eggs is not at all unusual. A specimen of the Cirl Bunting, (*Emberiza cirlus,*) was shot near the town about three years ago.

The Common Crossbill, (Loxia curvirostra,) is a very rare winter visitor.

The Tree Sparrow, (Fringilla montana,) is common, building usually in a hole of a decayed tree, and sometimes also in a thick blackthorn hedge.

The Brambling, (Fringilla montifringilla,) is exceedingly rare; but the Mountain Linnet, (*Fringilla montana,*) and Lesser Redpole, (*Fringilla linaria,*) breed with us annually.

All the Woodpeckers, except *Picus martius,* are found occasionally; the Green Woodpecker, (*Picus viridis,*) however, is the only one of the family which can be called common.

The Nuthatch, (Sitta Europœa,) is rare; specimens, however, are occasionally obtained. The Wryneck, (*Yunx torquilla,*) is quite unknown in this part of the country.

The Kingfisher, (Alcedo ispida,) breeds in several localities in the neighbourhood, but appears to be most common in winter.

Richmond, Yorkshire, February 9th., 1854.

(To be continued.)

SOME ACCOUNT OF THE COLEOPTERA ROUND EXETER.

BY MR. E. PARFITT.

Of this very interesting family of insects I am sorry to say I am very deficient as regards the names, though I possess a number of species collected in this neighbourhood. One of the most beautiful of our native insects is the *Cincindela campestris,* which is found in considerable abundance on Haldon, and also in Stoke Wood; they were particularly numerous at the former place in 1850. Another very beautiful Beetle I took in Stoke Wood flying over the furze on a hot sunny day in August, 1850; I have not seen a single specimen since: it is *Rhagium bifasciatum. Carabus hortensis* is a rare insect with us; I have only seen one. *C. violaceus* is not common in this neighbourhood. *C. catenulatus:* this is more frequently to be met with than *C. violaceus. C. cupreus* is very common in gardens, etc. Many other species of this family I am not able to furnish the names of. Of the family *Dermestidæ* I possess several species. *Dermestes murinus:* this species I have met with in a dead Magpie which was lying on the ground near Exeter. *Staphylinus erythropterus:* this is frequently to be met with round Exeter; I have often seen it on the Topsham road. *S. maxillosus* is rare, at least I have only seen one specimen, but *S. olens* is particularly numerous by the side of the wall on the Topsham road. *Pœderus riparius* is very common.

Of the family *Histeridæ* the most common is *Hister unicolor,* and another with red somewhat spreading spots on each elytron; both kinds are found in hot dung when made into cucumber beds. Of the *Lucanidæ, Lucanus cervus* is perhaps the most rare with us; I have not heard of its being captured by any one, but Dr. Scott told me he saw a specimen fly at a lamp in the railway station at Star Cross two years ago. Several specimens of *Dorcus parallelipipedus* I have taken in old stumps in this neighbourhood. *Geotrupes stercorarius* are very numerous about here, and another with copper-coloured elytra, which are not so hard, but more of a coriaceus substance than *G. stercorarius;* whether this is a distinct species or the males of the former I am not prepared to say, but at any rate they are not so plentiful as the one above mentioned, neither are they so large; if any of the correspondents of "The Naturalist" can give me any information on the subject, I shall feel greatly obliged. *Anisoplia horticola* is very common in gardens round Exeter. The *Melolonthæ*

were particularly abundant in 1851; *M. vulgaris* was in such quantities as I never saw before; on quiet evenings they made such a humming round the trees, that the noise was like an immense swarm of bees, or rather a number of swarms. *M. solstitialis* is common some years. Another, much smaller than the former, with reddish coppery elytra and black head and thorax; I have only met with two of these.

Of the beautiful and showy family of Beetles *Cetonidæ* I have not taken any about here, though *Cetonia aurita* has been brought me from the borders of Dorsetshire; I have not heard of its being seen about here. *Elater balteatus* and *E. lineatus* are common, also *E. sanguineus. Lampyris noctiluca:* I have not seen a single one in this neighbourhood; I suppose they do not like our soil about here; I have had the females brought me from Torquay, which is a proof they prefer a drier and more sandy district. *Meloe proscarabæus* is very common here. *Cantharis livida* is very common on water plants, also *C. fusca:* this species is not so numerous as the one above. *C. cardinalis* is rather rare; I have only seen two. *C. biguttata* is also of rare occurrence. *Pyrochroa coccinea:* several of this pretty insect I bred from larvæ found in an old rotten stump of laurel, which was sawn off even with the ground; the larva is very much like the common *Scolopendra,* but the jaws are larger and the colour of the whole insect a trifle darker, otherwise there does not appear to be much difference in the outward appearance. *Œdemera cærulea:* several specimens of this very beautiful insect I have taken on the Topsham road, but it is by no means common. *Tenebrio gibbosum* is common on the high lands in the neighbourhood of Dunsford, and also on Haldon, but not so abundant as at the former place.

Of the great family *Curculionidæ* I possess a number of species, but the fact is I do not possess a work on Coleoptera, and there is no such thing, so far as I can learn, in the libraries in Exeter that I can refer to; all I can do is to give the names of such species as I am pretty certain are correct; it may give some faint idea as to the general distribution of certain species. First, then, is *Curculio lineatus,* which was particularly numerous on cultivated leguminose plants, such as peas and beans, what are called broad beans I mean, (*Faba sativa.*) *C. argentatus* was very abundant, too much so a great deal, for they eat and destroyed the young shoots of pears to a considerable amount in 1852; I have not noticed many this year. Another is found in great numbers on elms in the neighbourhood; it is the *Otiorhynchus sulcutus;* and several other nearly allied species. The largest species, I believe, that is found here is *C. pini:* this I have found eating the leaves of the common ivy, (*Hedera helix,*) but it is not common, as I have only seen three specimens since I have been here. *Mordella sulcata* is not very common, at least I have only come across three or four. A very beautiful and rare insect in this neighbourhood is the *C. frumentarium,* and from its specific name we may be very thankful it is scarce. In 1851 I had several leading shoots of different species of *Pinus* brought me, which had died or were dying; these had been bored

into and the centre or pith eaten away by some insect, which proved to be *Hylurgus piniperda.* In one or two instances the *Pines* had been planted out where they were intended to remain to form ornamental trees on lawns; the consequence was they had to be taken up as useless, for when once the leader of a *Pinus* is destroyed, the beauty of the future tree is destroyed also. From the quantity of elms which abound in this county, the larvæ of *Scolytus destructor* are very numerous; I have had a difficulty of obtaining specimens of the perfect insect, but have at length succeeded in taking three or four specimens.

Of the family *Leptura* I have only been able to take one species, *Leptura verbasci.* The larva of this lives in dead wood, such as stakes used in gardens, etc. In 1851 I saw the work of an insect in a laurel stake used for staking raspberries; I with my knife cut away the bark and wood till I arrived at the end of the hole, which was worked round the stake beneath the bark but not touching it; the hole was filled up with the gnawings of the larvæ, but it did not appear to have passed through it in the shape of food. The insect when found had passed through the larva state into the pupa, which was nearly white, and not enclosed in any cocoon or horny chrysalis, but merely enveloped in a transparent skin, so the perfect insect could be distinctly seen through it; the insect was without any colouring, that is, black or yellow. the larva itself I have not seen, so cannot give any description. The habits of this species no doubt have been observed before by others, but I have not seen it; I shall be glad should I have added anything in its habits or economy not before observed, as anything in the habits and economy of insect life tends to one's knowledge and gratification. The beautiful and curious little Tortoise Beetle, *(Cassida viridis,)* is frequently to be met with in meadows on *Cnicus arvensis.* I have also taken one specimen of *Coccinella variabilis;* it is the only one I have seen. Thus ends my very poor and meagre list of Coleoptera.

4, *Muir-field Place, Exeter, December 10th.*, 1853.

NOTES ON LAND AND FRESH-WATER MOLLUSCA.

BY J. W. WATSON, ESQ.

Perhaps a few remarks on some of the Land and Fresh-water Shells, which have come under my own observation, may not be out of place in "The Naturalist."

There is one circumstance with which I have often been struck, and I have no doubt others have been so too, namely, that of the great sensitiveness to moisture, which many of the Land Molluscs exhibit, particularly those inhabiting mountainous and rocky districts, such as the genera *pupa* and *vertigo,* which are generally found most abundantly on Limestone formations. Another very sensitive Mollusc is *Helix Lapicida.* Well do I remember taking a walk of six miles, one sultry summer's day, to the top of one of the Hambleton Hills,

near Thirsk, in seareh of this shell, not knowing its peculiarity. When I arrived at the foot of the mountain, I eould find no traces of it, but thought when I got to the top, I should be fully repaid; there again I was disappointed, and had the mortifieation of only meeting with a eouple of specimens, eompletely blaneheđ by exposure to the sun and weather; and was obliged to return without obtaining the object of my journey; the only eonsolation I reeeived being a few mosses and liehens, whieh were new to me.

I was somewhat disappointed a seeond time, when on a tour through Wensleydale, at finding but few specimens of this shell, which had been eolleeted in great abundance near Aysgarth, a few months before, by a young friend, who was with me at the time, and had no doubt but that we should meet with it again; but though there had been a eonsiderable shower of rain a few hours before we visited their habitat, it was only after a laborious seareh that we found a few speeimens; whereas had there been a eontinuous rain for some time, we should have found them erawling in all directions over the low walls which abound there, in plaee of hawthorn hedges; for it was during a wet season that my friend had found them.

The same faet is true of *Clausilia dubia*, whieh is found ehiefly and most abundantly in Limestone distriets, though I have not found it in this neighbourhood, where Magnesian Limestone abounds; but we have *Helix Lapicida* in eonsiderable numbers. The first time I met with *Clausilia dubia* was elose by Houghton-le-Spring, on the Sunderland road, where it is eut through the Limestone Cliff. It was extremely abundant, together with *Bulimus obscurus*, as a quantity of rain had fallen the previous night. But onee when I sent to a friend in the neighbourhood, to gather me a few more speeimens, it was with diffieulty he eould find a few stragglers. *Zonites umbilicatus* may be ranked among those enumerated above, as it is essentially a Limestone Shell.

Though I have mentioned these particularly, I would not deny that all Land Molluses are effeeted by the rain; we need only go a few yards from our own doors, after a wet night, to feel eonsiderable diffieulty in avoiding the destruetion of numerous *Limaces*, *Arions*, *etc.*, whieh are erawling about on the paths. But I eonsider that those I have mentioned are peculiarly sensitive to moisture. Probably it is owing to the almost utter absence of moisture, in any other than damp weather, on the roeks and walls, whieh the pupa, etc., inhabit, which eauses them to seek ereviees, and to bury themselves amongst the stones and in the soil.

These remarks have been made ehiefly beeause many who eolleet Shells, are often disappointed at not finding those they are looking for in any partieular loeality, though they have been told of their abundanee there; and that they may know that the best time for making a erusade against sueh, is during or soon after wet weather.

Another eireumstanee has very mueh interested me, that is, the gregarious nature, if we may so express it, of several speeies, which literally swarm in

some places, and yet extend to no very great distance. Among such may be numbered *Helix virgata, ericetorum,* and *Cantiana,* particularly *virgata,* which I first found near Middlesbro' in the greatest abundance, but confined, as far as I could discover, to comparatively small areas.

This might be owing to a difference in the soil or formation, did not observation prove the contrary. When at Thirsk once, I observed this fact with regard to *Cantiana,* which was pretty common a mile or two out of the town, but confined to a small space; and if I had not been directed pretty clearly to the spot, I should have had some difficulty in finding it. *Azeca tridens* seems to be another of the same class. This, though by no means an abundant shell, I have found occasionally in considerable numbers near Ayton; and as I always found the above rule hold good, I have come to the conclusion that, generally, when one is found, a colony is not far distant.

With regard to Water Shells, I have frequently noted that one or two species abound to the exclusion of others. This, I have thought, is owing to one having got the upper hand, and preying upon other species, or at any rate destroying them. This is very noticeable in the *Limnæus* tribe. The first specimens of *Limnæus Stagnalis,* which I remember to have seen, were from some ponds near Stockton, collected by my friend, George Dixon, of Ayton; and, with the exception of *Velletia lacustris,* which was found riding on the backs of the *Stagnalis,* there was scarcely another Shell in the pond, except, perhaps, *Cyclas cornea;* whilst in other ponds in the neighbourhood there was not a single specimen of *Stagnalis,* but abundance of *Pereger.* The only ponds in which I have found *Cyclas lacustris,* have been almost destitute of other species; in one near Ayton they were very plentiful. *Planorbis lævis* is found in a small fishpond here, and though almost the whole district for two or three miles round, and in some directions for five miles, has been diligently explored, I am not aware that they have been found in any other pond in the neighbourhood, though they are particularly abundant in the above-mentioned pond, but no other Shell is to be found along with them, except a few *L. pereger.* In fact I might go on enumerating almost the whole of the Fresh-water Shells, which have come under my own observation, as examples of what I have stated. The *Pisidium* is a good example. If two pieces of water in the same neighbourhood are found to contain *Pisidium,* it very often turns out that the whole of those in the one are of a different species from those in the other.—This, though not invariably the case, I have found very frequently so. I have observed, too, that in the same running stream, where more than one species of Mollusc abounds, they seem to congregate, as it were, in colonies; but at the same time mixing more or less with each other, from the outposts of one species coming in contact with those of another, and from their being frequently carried along by the stream without exercising any will of their own.

A fruitful source of some of the smaller Shells, as *Pupa, Vertigo, etc.,* to the mere collector, is the *débris* which is brought down by various streams,

when, during periods of unusually stormy weather, they overflow their banks. I once found *Achatina acicula* in considerable numbers, and generally in a pretty good state of preservation, though the animals were all dead amongst the wreck brought down by the River Tees, and deposited on its banks near Middlesbro.' A few specimens of *Vertigo cylindrica* were found amongst it, together with several other common kinds. These Shells had most likely come down from the Limestone district through which the River Tees flows. I have come to this conclusion, as we have found *Achatina acicula* and *Vertigo cylindrica* amongst the roots of grass which fill the fissures and clefts of the Magnesian Limestone cliffs of West-vale, four miles from Ackworth.

Flounder's Institute, Ackworth, 7th. of *2nd. month,* 1854.

Miscellaneous Notices.

Common Rat, (Mus decumanus.)—A pure white specimen of this Rat was caught in a trap in the stackyard at Canledge Park Farm, near this town, during December last, the skin of which is now in my possession.—W. Armstrong, Alnwick, February 1st., 1854.

Curious conduct of the Hooded Crow, (Corvus cornix.)—As I was riding in this neighbourhood on the 8th. instant, I noticed a Gray Crow pick something off the grass in a low wet field by the road side, and fly up into the air some height; it then threw its head up and rose a little higher perpendicularly, its flight at that time resembling that of a towering Partridge just before it falls; it then turned nearly on its back, and let drop something from its beak, which I thought was a Mouse, but I could not get near enough to ascertain this distinctly. The Crow repeated his flights four or five times, and then I left him. How long he had been amusing himself in this way before I saw him, or how long he continued to do so after I left him, I cannot say. The greatest height to which it flew might be twenty yards. What was his object? It could hardly be to kill the Mouse, which he could have effected with one stroke of his powerful bill.—W. Waldo Cooper, Rectory, West Rasen, February 9th., 1854.

Nutcracker, (Nucifraga caryocatactes.)—A Nutcracker was shot off Yarmouth, Norfolk, on 7th. October, 1853.—T. Southwell, Fakenham, February 11th., 1854.

Great Gray Shrike, (Lanius excubitor.)—One killed near Fakenham towards the end of October, 1853; another a short time later near Lynn.—Idem.

Black Grouse, (Tetrao tetrix.)—A gray hen brought off her brood in Refley Wood, about two miles from Lynn, last summer. This bird was introduced some years ago at Saudringham, and I am informed has increased in number of late.—Idem.

Greenshank, (Scolopax glottis.)—I saw a Greenshank at Lynn, in the end of August last.—Idem.

Pectoral Sandpiper, (Tringa pectoralis.)—I saw a specimen of this rare bird, which was shot on the 30th. of September last, near Yarmouth, Norfolk.—Idem.

The Pink-footed Goose, (Anser brachyrhynchus,) has occurred several times; and *A. albifrons* has been unusually common this winter near Lynn.—Idem.

Little Auk, (Mergulus alle.)—Three specimens were killed in Norfolk, in November, 1853:—one near Norwich, one near Yarmouth, and a third near Lynn.—Idem.

The Nightjar, or Fern Owl, (Caprimulgus Europæus.)—I am induced to send you a few notes on the habits of this bird, as your correspondent G. R. Twinn, Esq., seems to think himself somewhat unfortunate in not having been able to discover its nest; and certainly when he discovers one, it will be a very remarkable circumstance, seeing that it makes none, but its eggs may easily be discovered in any spot frequented by the bird. Darenth Wood, in Kent,

produces it in some numbers. Soon as the shades of evening gather round, begins the Nightjars' rattle, as I call it from its resemblance to the sound produced by that constant companion of the policeman on his lonely round—from this circumstance they may be called "Policemen of the Wood." This is kept up for an hour or more, when it ceases. At a later period of the night they have crossed my path in silent flight;—sometimes as late as twelve o'clock, and so close, that I have expected to have had my hat knocked off as they whirled past in chase of some favourite beetle or moth. Oft and many are the times on a fine clear night, when entomologizing, that I have sat down on some neighbouring bank or fallen tree, to listen to their mysterious melody, if I may so call it, strangely breaking upon the stillness of the swiftly closing eve. You may blame me for keeping late hours. I confess myself a night rambler. I love to watch the moonbeams as they steal through the boughs overhead; to listen to the Nightingale's sweet song; to the rustling of the pendant leaves; and to the sighing of the wind away up in the tops of the tall trees.—But to resume. A word more about finding their eggs. Notice the spot where you heard the birds commence their rattle; the next morning repair to that spot—look well, beating the bushes the while to the right and left, when perchance you will see a bird tumble close to your feet, and bobble on a yard or two in advance, trailing its wings along the ground. You follow it, expecting soon to capture the seemingly crippled bird; suddenly its powers of flight are recovered, and it disappears before your wondering gaze; its object is attained, itself and eggs are so far safe; but retrace your steps to the spot where you first put up the bird, look well around, and in some dry open spot you will find two eggs laid in a little hollow among grass or heath, which accounts for your correspondent's unsuccessful search; but I must conclude, hoping that my plain remarks may not give offence, and that he may not think me more plain than pleasant. To give instruction was my object in penning these observations.—H. J. HARDING, 1, York Street, Church Street, Shoreditch.

Snow Bunting, (E. nivalis.)—This species is very abundant in the marshes below Louth, during the winter months, on a tract of land in the parish of North Summercoats, which has lately been reclaimed from the sea by my brother, Henry Alington Pye, Esq., of Louth.—R. P. ALINGTON, Rectory, Swinhope, Lincolnshire.

Proceedings of Societies.

Yorkshire Naturalists' Club.—July 6th., 1853.—W. ANDERSON, ESQ. in the chair.

MR. GRAHAM exhibited a chicken with four legs, and rudimentary wings, which had been hatched at Richmond.

MR. O. A. MOORE exhibited a curious specimen of the Common Mushroom, on which a second one had become inverted, with the gills and root upwards. He also exhibited and made some remarks upon some calcareous incrustations, which occur in abundance at St. John's Well, near Sutton-on-the-Forest. The water at this place being strongly impregnated with carbonate of lime, deposits calcareous matter upon the vegetation with which it comes in contact. The vegetable tissue subsequently disappearing through decay, perfect casts of the plants are left in the stony mass, resembling the casts of organic bodies, which occur in the regular fossiliferous strata.

MR. CHARLESWORTH exhibited a series of beautiful Fossils, recently obtained from the Yorkshire coast, including two examples of a large and very remarkable undescribed bivalve shell from the chalk.

The club decided to purchase a collection of these specimens, for presentation to the Yorkshire Philosophical Society.

The following works were bought for the library of the Club:—"Gosse's Rambles on the Devonshire Coast;" "Henfrey and Tulk's Anatomical Manipulation;" "Cock's Sea-weed Collector's Guide."

The business of the evening was concluded with an account, by MR. CHARLESWORTH, of some of the more remarkable facts in the history of the animal of the Paper Nautilus; in the course of which he detailed the recent important discoveries by Müller, that the male of the Paper Nautilus has no shell, and that the curious creature, described by Cuvier as a Parasite upon

the Nautilus, under the name *Hectocotylus*, is really an organism connected with the function of reproduction, though apparently enjoying a temporary independent existence.

September 7th.—W. Anderson, Esq. in the chair.

Mr. J. Hoggard, Jun., of Clifton, was elected a member.

Mr. Charlesworth exhibited a remarkable Fossil from the Lias, of Whitby.

Mr. Graham exhibited two specimens of the Greenshank, *(Scolopax glottis,)* shot by T. H. Barker, Esq.; the first specimens recorded as having been taken in Yorkshire.

Mr. Graham also exhibited two white specimens of the Weasel, and a very fine specimen of the Common Teal.

The Rev. H. V. Palmer then read a very interesting paper on "The Manifestations of Instinct and Reason in the Lower Animals."

After a short discussion, the meeting separated.

October 5th.—W. Anderson, Esq. in the chair.

A letter was read from Dr. Morris, resigning the office of Secretary, in consequence of his removal from York.

A vote of thanks was unanimously passed to Dr. Morris, for his past services to the Club. Mr. S. W. North was appointed Secretary for the remainder of the year.

The Chairman exhibited some very fine specimens of the Gourd, from Col. Richardson, of Fulford.

Mr. Graham exhibited a white Weasel, and a beautiful specimen of the Peregrine Falcon, sent by Payan Galloway, Esq., of Thirkleby.

Mr. Charlesworth exhibited specimens of Fossil Shells from Hambleton, near Thirsk, supposed to belong to the genus *Pholas;* also a rare recent British Shell, the *Natica Helicoides*, found at Staithes.

Mr. Wright exhibited a Kitten, which had been born alive, having two distinct bodies and only one head.

After some general conversation, the meeting separated.

November 2nd.—E. Charlesworth, Esq. in the chair.

The Chairman exhibited the jaw of a Fossil Saurian, sent by Mr. Ripley, of Whitby, remarkable for its great length: it had been found at Whitby. He also exhibited some specimens of the Locust, from North America, which are remarkable, as they only appear at intervals of seventeen years, the caterpillars remaining dormant for that period.

Some interesting conversation then took place, relative to the disease now existing in the vine crops, and the potatoes, after which the meeting separated at the usual hour.

December 7th.—E. Smallwood, Esq. in the chair.

Mr. Bainbridge exhibited the head of a Rabbit, in which the teeth had attained an unusually large growth.

Mr. William Thompson exhibited a fine specimen of the Diver.

Mr. Graham exhibited several cases of rare British Birds, shot near York.

Mr. J. Pearson read a paper by Quarles Harris, and some extracts from the "Gardeners' Chronicle," relative to the disease which has recently attacked the vines in the wine-growing countries which excited a good deal of discussion as to the climate, state of the atmosphere and temperature under which the disease had manifested itself.

The meeting separated about the usual time.

Alnwick Botanical Society.—The Sixth Annual Meeting of the Society was held on Monday evening, January 30th., 1854, Mr. T. Walby in the chair, when the report was read by the Junior Secretary, Mr. W. Armstrong, as follows:—

"The proceedings of the Botanical Society during the past year have not been devoid of interest or importance. In no previous season has the study been prosecuted with so much ardour, perseverance, and success, especially in the elucidation of obscure and difficult genera. It was not to be expected that in a district previously so well explored, many new plants would be found; but the searches of our members have resulted in the discovery of numerous species and varieties, and even of some not hitherto observed in the county. The difficulties attending the study of the Cyperaceæ, Rosaceæ, Amentiferæ, Gramineæ, and the minute and polymorphous tribes of Cryptogamic plants, have been steadily encountered and successfully overcome. Neither the inclemency of the season, nor the fatigue of long excursions, have ever sufficed to throw a momentary damp on the enthusiasm of our members.

At the close of our fifth year a brief sketch of our indigenous botany, as far as relates to the immediate district to which our researches have been principally, though not exclusively, confined, will, it is hoped, be neither uninteresting nor useless. Our circuit is chiefly within ten miles of the town, but places of interest at a greater distance are occasionally explored by parties of our members, such as the rocky Hills of Spindlestone, the Kyloe Crags, Rothbury Forest, and the Cheviot Hills. Within an easy walk of Alnwick the following rare plants grow plentifully, many of them in extreme profusion:—Ranunculus Lingua, Cardamine amara, Stellaria nemorum, Geum intermedium, Chrysosplenium alternifolium, Pyrola rotundifolia, Lathræa Squamaria, Trientalis Europœa, Polygonum Raü, Paris Quadrifolia, Orchis pyramidalis, Habenaria viridis, Neottia Nidus-avis, Gagea lutea, Scilla verna, Allium Shœnoprasum, Juncus maritimus, Blysmus rufus, Carex extensa, distans, lævigata, pendula, vesicaria, and filiformis, Arundo Calamagrostis and Epigejos, Sesleria cærulea, Leptenus incurvatus, Polypodium Dryopteris, Asplenium marinum, Myrica Gale, Mœnchia erecta, etc., etc.

Besides the plants here enumerated, all of which are undoubtedly wild, there are numerous others appearing to grow spontaneously in our fields and woods, but which are generally considered to be introduced, and not originally native. The Snowdrop, Periwinkle, Red Valerian, Dame's Violet, Lungwort, Clustered Bellflower, Mountain Currant, Fly Honeysuckle, Hautboy Strawberry, Black Mullein, Leopard's Bane, Flax Dodder, Green Hellebore, Crocus, Narcissus, Daffodil, Columbine, Water Liliés, Celandine, Sweet Violet, Sweet William, Sweet Cicely, Orpine, Martagon Lily, Jacob's Ladder, Butcher's Broom, Bluebottle, Marigold, Misseltoe, Borage, Gold of Pleasure, etc., besides a variety of trees and shrubs, are mostly frequent in the neighbourhood, and some of them exceedingly abundant, though they may have been planted, or escaped from gardens, and are now only naturalized. The list might be very greatly extended, but enough has been said to show how rich our district is in botanical treasures.

While, however, we possess a large and diversified flora; while many plants, usually considered rare, are very common with us;—on the other hand it is remarkable that many plants, generally dispersed in abundance over the kingdom, and in some places troublesome weeds, are so seldom met with here, that they may be deemed rare. The Wormwood, Mallow, Mugwort, Hemlock, Cuckoo Pint, Annual Knawel, Mayweed, Water Pepper, Water Plantain, Duckweed, Houndstongue, and Cowslips are not common in the vicinity of the town; and some of them are so very rare, that our members have never seen them in the district.

Although the fascinating species of Flowering Plants have engaged the studies of most of our members, the minute, intricate, and multiform, but curious and interesting tribes of Cryptogamic Plants have received no small share of our attention. It would far too much extend the limits of this Report to give even an outline of the state of Cryptogamic Botany in this neighbourhood. It may suffice to state that it is not less rich in flowerless than in flowering plants—Grimmia tricophylla, Dicranum Dillenii, and Hypnum undulatum, all in fruit; Peziza auricula, Tulostoma mammosum, Polyporus perennis, Mitrula paludosa, Cantharellus cornucopioides, Cyathus crucibulum, and a vast number of other species grow in profusion near Alnwick; their beauties unknown and unheeded except by the botanist, who finds interest in the wild moor and marsh, and new charms in the forest and the field.

Encouraged by the signal success of our researches in practical Botany, it is intended to make some effort to publish our transactions annually, commencing at the close of the present year with a "Flora of Alnwick." Our district in future will be bounded on the north by Bamburgh, on the west by Cheviot and the Simonside Hills, and on the south by Morpeth, the Wansbeck, and the Wallington Moors. When it is considered that our register already records nearly eight hundred Flowering Plants and Ferns, it is evident that our future labours will

increase the number of our species till our Flora surpasses, as it already equals, most districts of similar extent in the kingdom.

Our Society was formed in the beginning of 1849, and more than five years have now elapsed without any diminution in the enthusiasm of our members. Never indeed was there so much done in the study, though no lectures have been delivered; and a provincial Society, which without extraneous assistance, is free from pecuniary liabilities, and has done so much for the mutual improvement of its members, must be considered emphatically successful.

It is hoped that while the Society increases in members, as it has done in the past year, there may be nothing in our next season to occasion regret. That war, pestilence, and famine may pass lightly over us, and find our ranks entire, and our friendships unbroken; and that He, who formed the lilies of the field, and bade us consider how they grow, will preserve us in body as healthful as the hills over which we roam, and in mind as pure as the flowers we love."

JOHN LAMB LUCKLEY,
WILLIAM ARMSTRONG, } Secretaries.

The Report was adopted unanimously, and the following Office-bearers were appointed for 1854:—

President.—J. DAVISON, Esq., M. R. C. S.

Vice-Presidents.—MESSRS. T. WALBY, H. HUNTER, G. COCKBURN, AND W. RICHARDSON.

Secretaries.—MESSRS. J. L. LUCKLEY AND W. ARMSTRONG.

Treasurer.—MR. EDWARD A. STORER.

An Herbarium and Acting Committee were afterwards chosen; and the meeting, after a long discussion of various subjects, separated at a late hour.

Natural History Society of Glasgow.—February 7th., 1854. The ordinary meeting of the Natural History Society of Glasgow was held this evening. Mr. Roger Hennedy occupied the chair.

The Secretary read the following paper upon the "*Medusæ* and Little Fishes," by Charles W. Peach, Esq., of Wick:—

"Having read in various works that the large *Medusæ* preyed upon fishes for food, I have thought it right to place on record the following, which I observed in the present year at Peterhead, first stating that the under-mentioned *Medusæ* were very abundant, so much so, at times, as sadly to inconvenience the fishermen, and render it somewhat difficult to lift the oars, especially of small boats, from amongst them. They were the *Cyanea aurita* and *C. capillata* or *C. inscripta?* of Peron.

I extract the following from my journal:—1st. August, 1853.—I have observed for the last few days very small fishes playing round the large *Medusæ* in the harbour and bay. Sometimes they sported round the *C. aurita*, but would instantly leave it for the *C. inscripta* when an enemy was near; occasionally two or three might be seen attending one of these *Cyanea*, and when attacked or alarmed, they would rush under the umbrella amongst the tentacula, and shelter in the large folds connected with the ova, remaining there until the danger had passed, when they would emerge, and sport and play about their sheltering friend; it was really pleasing to observe their movements when thus gambolling round their sanctuary.

So closely would they lie when under the umbrella on seeing danger, that they were taken into a bucket with their shelter, and when permitted to rest for a short time, they would come out and sport as when in the sea. I captured many this way, at times two or three, varying from less than an inch in length to two and a half inches; they were *young Whiting*, probably the offspring of the larger ones which were so abundant at this time in the bay.

It is evident these little creatures feel that shelter, and consequently *protection*, is afforded by these glass-like creatures, and not *destruction*, and more, they prefer the "stinging one," with its eight bunches of long tentacula, and large fringed ovaries, to the *C. aurita*, with its single, and frequently short row of delicate appendages.

I am led in this case to ask, what becomes of the paralyzing influence of the tentacles of this *Medusa* on fish? I fancy it opens a new field for observation, and if it does not do away with the fish-eating propensities ascribed to these water-framed creatures, at least, it throws

considerable doubt on such an assertion, for we can hardly fancy that the little fish, like the moth around the candle, is fascinated thus to play around the *Medusæ* to its own destruction. I feel quite certain in these instances it believed it to be its *preserver*.

The *Cyanea aurita* is called at Peterhead "Loch Lobberton" or "Loch Robertson," the other, "The Doctor;" I record the provincial names for local reference, having found such names frequently useful to me in my researches.

The subject is so interesting, I cannot resist making one extract more.

2nd. August.—About six p. m. to-day I observed one of the little fish (Whiting) gliding round a small weak *Cyanea aurita;* a single "Baddock" (young Pollack) about five inches in length saw it and attacked it; the little fellow easily evaded all its movements by dodging round its friend; the chase was soon joined by another, and both set to work; for some time it baffled the pursuers; one unlucky move drove it from its poor shelter, and then a severe chase took place; several more joined like a pack of hounds, the little creature rushed fearfully on the top of the water, for a time the fight was doubtful,—had "the Doctor" with its long appendages been near, it would have escaped; at length it became exhausted, and lay as if dead; the hunters, however, bit and dashed it about for some time, but not being able to swallow it, they left it to all appearance dead, and the tide gently drifted it along with the *Cyanea.* After a time it recovered, and took refuge as at first; this movement was soon seen by the fiendish pack, they allowed it a very short respite, and soon drove it into open water, and after a much shorter chase, this time they killed it, and, as before, not being able to bag their game, left it, exulting no doubt in their noble deed of daring. I felt greatly excited, and much sympathy for the poor thing, and although I threw stones, and did all I could to drive off the pack, so intent and determined were they on their murderous cruize, that they dashed on unheedingly; at any other time the least stone would have turned them aside and alarmed them.

We here see that the young of one species of fish, although much like those of another, will not allow such "to come between the wind and their nobility," carrying out "war to the knife" to the member of any other clan presuming to poke his nose into their territory.

I ought to have said, I have never seen a fish in the stomach of these *Medusæ*,—all could liberate themselves when they pleased."

Thinking this worthy of notice, I have forwarded it for the purpose of being read at your next meeting, so as to preserve a record, and set others observing in other localities.

Dr. Lyle was admitted a resident member.

Business being finished, the society adjourned till the first Tuesday in March.

The Retrospect.

In Vol. i., page 189, we read of a Hen Chaffinch having been "frozen to death on her nest." I do not question the fact that this bird was found dead on her nest, but that she was "frozen to death" in that situation, admits, I think, of *grave* doubts. If this bird was "actually frozen to death" in so warm and comfortable a nest as that of the Chaffinch, I should like to know how the rest of the Chaffinches in that district came off, which pass the night on the bare twigs or sprays; or is it the writer's opinion that these may occasionally resort to gymnastic exercises during severe nights, in order to keep their blood in circulation, and that the maternal feelings of the bird in question being too strong to permit her to indulge in this kind of exercise, which would have involved the destruction of her eggs and her hopes together; she thus, notwithstanding the protection from cold the warmth of the nest must have afforded her, miserably perished. Plausible as such an opinion may be, I must confess that I cannot view the matter exactly in this light, and inasmuch as it does not appear that the Rev. R. Barras, to whom the nest was brought, made, or caused to be made, a *post-mortem* examination of the body, so as to be quite sure that the cause of death was as stated, I feel vastly inclined to attribute its death to some other cause than the one assigned; and I am convinced that had such *post-mortem* examination been made, and had a coroner's inquest been held, the surgeon's evidence, and that of other intelligent witnesses, would have caused the jury to bring in some other verdict than that of "Found Frozen to Death," or "Died from exposure to the Cold." If there was an intense degree of cold in the atmosphere at the time the bird was found, the body might have

been in a frozen state; but it does not necessarily follow from that circumstance that the bird must have been "frozen to death," since it is far more likely that the freezing of the body commenced after death than before it. The writer concludes with the remark that "the preceding winter had not been very severe." What the preceding winter had to do with an occurrence said to have taken place in the spring, it would be difficult to comprehend. If by that remark he would lead us to infer that there was an absence, throughout the entire season, of any great degree of cold, then the story would assume an aspect still more strange and marvellous, for the bird would then appear to have been not only "frozen to death on her nest," but "frozen to death" in weather rather mild than otherwise.—S. Stone, Brighthampton, Oct. 12th., 1853.

The Starling.—At page 220, vol. iii. of "The Naturalist," I stated that this bird "excavates a deep hole," which Mr. Stone thinks ridiculous. The word "excavate," as Mr. S. should know, means *very commonly* to "*hollow out*," which is not exactly to *bore*. Using the word in this sense I am quite correct. But for his satisfaction I may expand my statement. The Starling frequently selects an old tree for the purpose of incubation, in which there are holes formed either by Woodpeckers, or, *more commonly*, by decay (Mr. S. seems to forget that Old Time may have a hand in the matter.) These holes, however, from various causes, are often so shallow that it requires to deepen them and to *hollow them out*, which it can *easily* do. I make this additional explanation, although I hope ornithological readers understood my original statement without difficulty. I have not therefore "mis-stated facts," of which offence I am rather uncharitably accused; and I may be allowed to suggest that, in future, a reference to an English dictionary would save, as it would in this case have done, considerable trouble.—J. Longmuir, Jun., Aberdeen.

The Querist.

Common Shrew, (Sorex araneus.)—With regard to G's query at page 24 of your third volume, the following extract from Mr. Jesse's interesting "Scenes and Occupations of Country Life" may serve to throw some light on the subject. At page 66 he says, speaking of this little animal, "I am obliged to confess that it is a most pugnacious animal, and this pugnacity is the cause of the death of those we meet with in our walks, during the months of April and May. At this season of the year the males fight together, and I have examined several of those I have found dead. They were all males. I sent some also to Mr. Gulliver, a friend whose researches into Natural History have been equally curious and indefatigable, and he discovered several livid spots about the neck and shoulders. This decisive fact will be sufficient to controvert the various opinions which have been brought forward as to the frequent appearance of the dead Shrew."—J. Cavafy, Westbourne Terrace, London, February 9th., 1854.

Swallow-tailed Kite, (Nauclerus furcatus.)—Can any of your correspondents inform me whether the cere and legs of the Swallow-tailed Kite are yellow, and the irides silvery cream, at any period of its life? these are the colours given by Wilson, while Morris and Yarrell describe the cere and legs as blue, and the irides brown. With regard to the colour of the cere of *Polyborus Braziliensis*, it is brick red in a living specimen in the possession of the Zoological Society; the legs are dull yellow. There are also some other exceptions: in the adult and young of the Chilian Sea Eagle, (*Haliaëtus Aquila*,) the cere is bluish, the legs dull yellow. In the Harpy Eagle, (*Harpyia destructor*,) the cere is bluish black, the legs ochre yellow.—Idem.

Unknown Eggs.—The white eggs mentioned by Mr. Hodge, in the January number of "The Naturalist," may possibly have been those of the Blackstart, (*Phœnicura tithys*;) its eggs are glossy white, from five to seven in number, the nest generally placed in a hole in a rocky bank. I believe the Wryneck generally builds in holes of trees; the size of the eggs, however, certainly approaches nearer to those of the Wryneck than the Blackstart.—Idem.

In reply to the inquiry of Mr. Tuckett in "The Naturalist" for September, 1851, about the occurrences of the Great Bustard, I may refer him to my "History of British Birds," No. 47, where he will find, I think, a pretty complete catalogue.—F. O. Morris, Nafferton Vicarage, Driffield.

TO ENTOMOLOGISTS.

MR. FOXCROFT begs to return his sincere thanks to the Trustees of the British Museum, the Nobility, Gentry, and Clergymen, and the Members of the Entomological Societies for the patronage he has received for a number of years; and takes the liberty of informing them and others, that he intends collecting Insects during the whole summer of the present year, (1854,) in the best locality known in Scotland, which is round the Black Forest, Rannock, Perthshire; commencing on the 6th. of April, and collecting for six months.

Mr. F., to enable him to carry out this plan, wishes to raise a sufficient sum by Subscriptions of One Guinea; each Subscriber to be entitled to one specimen of every species collected during the season, which will be equally shared in November, on his return, by himself. Those Subscribers who are Coleoptera-collectors, will have all the choice and rare Beetles divided amongst them in the boxes; and those who are collectors of Lepidoptera, will have all the rare and best specimens of Moths and Butterflies divided amongst them. The specimens will be sent to the residences of the Subscribers; and the boxes containing them are to be returned or paid for.

Mr. F. hopes, by stopping in one locality in Scotland, to take such choice Insects, or some new specimens that may be rare, to afford an excellent opportunity to gentlemen to obtain what may be wanting for their Cabinets; also for Proprietors of Museums, and collectors of British Insects.

Persons wishing to become Subscribers, are requested to send their Subscriptions by Post-office Order, or otherwise, by the end of March at the latest, to MR. JAMES FOXCROFT, 3, Union Yard, 191, Oxford Street, London. Post-office Orders to be made payable at 210, Oxford Street.

No person will be allowed to subscribe after the 6th. of April; and no one will be considered a Subscriber until he has paid his Guinea.

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NOTICES TO CORRESPONDENTS.

Communications have been received, up to April 20th., from W. Sawers, Esq.; —R. Gray, Esq.

Contributions have been received, up to April 20th., from S. Stone, Esq.;—G. Donaldson, Esq.;—G. M. Barnard, Esq.;—J. Fothergill, Esq.;—J. Garland, Esq.;—G. R. Twinn. Esq.;—J. J. D.;—G. Lawson, Esq.;—J. P.;—J. Mc'Intosh, Esq.;—H. Colquhoun, Esq., M. D.;—C. W. Rothery, Esq.;—H. H. Drury, Esq.;—E. J. Meynell, Esq.;—Anceps;—J. B. Davies, Esq.;—C. Wood, Esq.

Book Received.—"Balfour's Class Book of Botany." Part II.—"Physiological Botany." A. and C. Black, Edinburgh.

We have received communications from J. J. D., of West Grange, Perthshire; from J. P. of Rochdale; and from W. of Macduff, Banff. Will these gentlemen favour us with their names *in confidence*, in conformity with our Rule.

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M.D., Driffield;—Books for Review, and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row, London.

SINGULAR OCCURRENCE OF POLECATS, (*MUSTELA PUTORIUS,*) ATTACKING A MAN.

"A FORTNIGHT since, as John Roderick, of Llanidloes, carpenter, was returning home from Pantygessel, in the parish of Llanwnog, he was attacked by a number of Polecats, which bit him in several places, and one crept up his body, and bit him severely on the shoulder. With difficulty he made his escape, and upon arriving at Pantygessel he aroused the inmates, who set out in chase of the animals, and killed four. The poor fellow is not yet recovered from his fright and injuries."—Thus far appeared in the Western Courier Newspaper, during August 1853.

The Reverend Courtenay Bulteel, of Holbeton Vicarage, Devon, considering so short an account of this circumstance unsatisfactory, wrote to Roderick, and he being unable to reply handed over the note to a clergyman in the neighbourhood, who very kindly answered it, and the following interesting particulars were elicited, of which I forward a copy:—

The Green, Llanidloes, Montgomeryshire, August 29th., 1853.

Rev. Sir,

Interested like yourself in Natural History, I was just now inquiring from John Roderick, (who happens to be at work here this morning,) the particulars of the "attack upon him by the Polecats," when he put your letter into my hands and requested me to reply to you.

I make no question, but the main facts were as stated in the papers—Roderick was passing down a cart track which crossed the second field from a hill farm-house, at which he lodged, between eight and nine o'clock one evening in the end of June; he came upon a group of Polecats, (which did not at the moment appear to be travelling across his path, but as I conceive to be stopped by the young ones becoming chilled and cramped as I have often seen Ferrets by the rain, which was then, and had been most of the evening, falling heavily,) these young ones seem to have been crouching in the wheel-rut, while the old ones would appear, from Roderick's account, to have endeavoured to shelter them, and at the same time to entice them forward, by going and returning towards and from the hedge. I may here observe that it proved the rain had dislodged them just before from their nest under the barn floor, it being extremely heavy, and great floods occurring on that night through the whole of this part of Wales.

The man having no stick, rushed forward and struck at one with his hat, and at the same moment "kicked another into the air;" in doing so he fell, and at once was fastened on by four or five of the Fitchets, (as we call them here:) two only of them reached his flesh, one, (an old one,) pinning him by the shoulder, and another by the heel, the others had hold of his clothes; he got out his pocket-knife and stuck it into that on his shoulder, and then getting on his legs he ran off, the Fitchets dropping off him one by one, that on the heel holding longest and most savagely. Hastening to the farm-house, he called some of the workmen, and returning with sticks and with sheep-dogs,

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they found the Fitchets in the adjoining hedge. Being overmatched, these now took to flight towards the barn, but the men succeeded in killing four, one of which was that which had been stabbed while on the man's shoulder; under the barn floor they found the remains of nearly twenty fowls, some lately killed with their heads only eaten off. The rain, as I have before stated, had burst in and evidently been the cause of the Polecats decamping in a body; a little beyond the field where they were met, is a rabbit-warren on higher ground, to which they appear to have been making their way.

The only point on which I have any doubt in the man's account is as to the *number*. I mean he may in his terror have over-estimated it; he says "they were more than a dozen; at least sixteen." Now if it was so, the only way of accounting for it is, that there having been a nest in or about the same place the year before, *two* pairs had kept together and bred under this barn floor; for, though I have often observed that a whole litter of Polecats remain with the two old ones through the summer and autumn, yet I have never known an instance of a Polecat producing at a birth more than six or seven, (and I do not think that they breed more than once a year,) though the Ferret, (which will breed with the Polecat, and their offspring I know to be productive;) the Ferret, I say, will sometimes produce *ten*, and I have heard of more.

I am, Rev. Sir, Yours faithfully,
JOHN MEREDITH.

Forwarded for "The Naturalist" magazine, by Rev. R. Archer Julian, Laira House, Plymouth, February 9th., 1854.

A GLANCE AT THE FEATHERED RESIDENTS IN, AND VISITANTS TO, THE GROUNDS OF TERRICK HOUSE; WITH A FEW REMARKS FROM PERSONAL OBSERVATION UPON THEIR HABITS AND PECULIARITIES.

BY STEPHEN STONE, ESQ.

(Continued from page 28.)

The Starling, (*Sturnus vulgaris*,) occupies every available hole under the tiles, or in the thatch of barn or summer-house, where, in a nest loose in construction, and coarse in the materials employed, being often nothing more than a few straws, it lays five or six eggs, varying in colour from pale blue to pure white. I have an egg of this species which bears the following inscription:—"Found in a Carrion Crow's nest, April the 26th., 1852;" this specimen I procured myself on the day and in the situation here recorded, the eggs of the "original proprietor" having been removed the previous day; whether the bird dropped this egg there by accident, or whether she deposited it there with the serious intention of adding others to it, and then proceeding to incubate them, I cannot now say; having most inconsiderately taken pos-

session of this one as soon as discovered, and thus destroyed the opportunity I might otherwise have had of observing what ulterior proceedings the bird would have adopted in reference thereto. I much regret my precipitancy in the matter, as the issue might have been of some interest.

I once saw a pair of these birds in great distress, in consequence of a whole army of invaders, in the shape of a swarm of bees, having stormed and taken possession of the citadel which contained their infant progeny. They seemed fully to understand and appreciate the formidable nature of the powers possessed by these invaders, for their screams and outcries, so long as the enemy continued to occupy the fortress, which was the greater part of one summer's afternoon, were loud, piercing, and incessant. Happily, however, the enemy, not finding the place sufficiently commodious, evacuated it before nightfall, and, much to their honour, and to the infinite relief of the parent birds, they, like brave soldiers, had disdained to harm or injure the helpless; for, on their leaving, the young birds were found to have sustained no manner of hurt, although unquestionably they must have been for some time in imminent danger of suffocation.

The young of this species remain in the nest until they are capable of sustaining very lengthened flights, in fact until they have become almost as perfect adepts in the art of flying as their parents. The youth of our own species would do well to take these birds for an example, and endeavour to repress their eagerness to escape from the trammels of home and education, and launch themselves upon the world ere they have become capable of resisting its temptations and allurements, and of avoiding the snares and dangers with which they are sure to be surrounded.

I have known a pair of these birds dispute, and that successfully, possession of the hole in a tree with the Green Woodpecker, (*Picus viridis*,) notwithstanding the superiority in size and strength of the latter bird.

In September last I witnessed what to me is an entirely new feature in the habits of the Starling. During the whole of one afternoon, some thirty or forty of these birds were to be seen over a particular spot, evidently hawking for insects after the manner of the Swallow tribe; or, from their vacillating mode of flight, they might be said to bear a stronger resemblance to a number of overgrown Bats in quest of prey. Launching forth from the top of an elm they traversed the air in all directions; and after making sundry captures returned, apparently fatigued with the unwonted exercise, and after resting for a few moments again launched forth to repeat their aerial movements. That they were in pursuit of some kind of insect seemed to me evident enough from their sudden and abrupt turnings—darting off occasionally at acute or other angles, and clearly making a grab at something; possibly an unusual flight of some coleopterous insect suited to their taste, caused this departure from their ordinary manner of seeking their food.

As an instance of the pertinacity with which these birds cling to a

favourite roosting-place, I may mention that a few years ago, a large flock suddenly took a fancy to a clump of evergreens immediately in front of, and close to, the entrance hall of Wotton House, the seat of the Marquis of Chandos. All attempts to scare them away on the first evening of their appearance proving ineffectual, a "council of war" was the next morning called, the result of which was that the gamekeepers and male domestics were "put under arms," and stationed in the evening around the carriage sweep, in the centre of which the clump of evergreens aforesaid was situated. On the re-appearance of the birds in the evening, volley after volley was fired into their ranks; still they persisted in their attempts to occupy the position they had pitched upon, which the survivors succeeded in doing, darkness at length putting an end to further hostilities for that night. The next evening the "action" was resumed, and continued till darkness again intervened; and it was not till this slaughter had been continued for several successive evenings and their ranks had in consequence become fearfully thinned, that they were finally driven from their "position," and compelled to look out for "quarters" elsewhere.

If the reader will now accompany me in an imaginary birds'-nesting expedition round the grounds, I will further point out to him the nests we shall be likely to meet with on the way, supposing the breeding season to be just at its height. Let us then first pay a visit to yonder summer-house partly clothed with ivy; its somewhat dilapidated condition outside impresses us rather favourably than otherwise with the probability of its richness in the production of oological treasures; nor shall we be disappointed in our expectations, unless a change should have taken place since the last summer I visited it. As we approach the entrance, and are about to pass into the interior, a bird of sober and unpretending colours darts silently away from our very elbow; our eyes follow her in her flight, which is but a brief one, for the next instant she is sitting on the nearest convenient post, or rail, or naked branch, where she has an uninterrupted view of us, and we of her; there she remains, and though unable wholly to suppress her anxiety, awaits with exemplary patience the issue of our visit. Our eyes now turn to the place from whence she darted off, and on the horizontal branch of some trained or climbing plant, we perceive a nest something like that of the Chaffinch, but less firm, compact, and beautiful; externally it is composed of tree moss and lichens, intermixed with wool and a large proportion of spiders' webs; internally it is lined with hair or feathers, or both. The nest is found to be placed close to the wall, so close indeed that the wall forms one side of it, or rather its being so placed enables the bird to dispense with the trouble of building a circular nest, it forming when detatched only half, or at most three-fourths of a circle, and has very much the appearance of a nest cut in two; thus the bird effects a saving of time, trouble, and materials. In it we find four or five eggs which, from their peculiarity in colour and markings, we should feel no hesitation in pronouncing to be those of the Spotted Flycatcher,

(*Muscicapa grisola,*) even if the bird were not herself before us in confirmation of the fact.

As we are examining this nest, another bird passes out with a graceful sweep from immediately above us, and, alternately rising and falling in curves, alights on the margin of a neighbouring fishpond, where, with apparent unconcern for the fate of the nest and eggs it has left, it forthwith commences running down the different species of flies it may there find disporting themselves in the sun. Having procured a short ladder, we mount to the place from whence this bird was seen to issue, and there in some hole or corner, where a brick or stone has been removed, either by the "hand of time" or the fingers of man or boy, and thus enabled it to effect a safe and convenient lodgment, we find its nest. This nest is rather rudely constructed, and composed of rather rude materials to boot, having evidently been selected from the manure heap in a neighbouring farm-yard; the lining consists of cows' hair, wool, and bits of rag. The eggs, five or six in number, are rather large for the size of the bird, which at first sight we could not fail to recognise as the Pied Wagtail, (*Motacilla Yarrellii;*) they are of nearly a white ground, freckled all over with bluish grey. Should the nest chance to contain one rather larger than the rest, and differing from them more or less in colour, we may without much risk of coming to an erroneous conclusion set it down as the egg of the Cuckoo, (*Cuculus canorus.*) I have in my collection a nest of this species, (the Pied Wagtail, not the Cuckoo,) lined throughout with well-washed snow-white dogs' hair, which gives it rather a *distingue* appearance. It may be as well to state, for the special behoof of the reader, that I supplied the bird with this material myself, having placed a quantity at her disposal about the head of the pollard ash on which the nest was situated, so soon as I found the superstructure sufficiently advanced for the purpose; this supply she readily availed herself of, without giving herself the trouble of searching for any other. By adopting this or a similar plan in reference to any other kind of bird, as the Goldfinch, Chaffinch, Hedge Warbler, etc., you may generally succeed in obtaining a nest lined with any desired colour.

The Pied Wagtail chooses a variety of situations for the construction of its nest, and places it at various degrees of elevation, sometimes even beneath the surface of the earth; I have on several occasions found it underneath a ploughed furrow on a stale fallow, and in a crack in the side of a newly-cut water-course. A pair produced an annual brood for several successive seasons over a door which opened on to the leads at the top of a lofty house in which we resided a few years ago. Perhaps the most favourite situations are old bridges and ruins, or stacks of haulm, peat, or faggots.

Although the male of this species is not to be regarded as a Braham, a Mario, or a Sims Reeves among birds, it nevertheless has a sweetly-warbled song, which it gives while tripping with airy lightness over the dew-bespangled lawn, along the roof of barn or dwelling-house, beside the margin of the lake,

or even upon parts of its surface where a safe footing is afforded it by the floating outspread leaves of the surpassingly-beautiful water-lily and other aquatic plants, in pursuit of its insect prey; and in the season of love it gives forth this song with redoubled ardour, as in the exuberance of its feelings, and in an ecstacy of delight, it dances about on the wing, not "with odd jerks and gesticulations", like the Whitethroat, nor by springing into the air, and then steadily descending in a curve like the Tree Pipit, but by repeated vaultings, in a manner peculiarly its own, around the neighbourhood its lady-love graces with her presence.

With us the Pied Wagtail is partially migratory, its numbers gradually becoming less as the winter advances, till in the depth of that season, a solitary bird is only now and then to be seen. Along the banks of the Isis, in Oxfordshire, I have often in November met with parties of thirty or forty, a "gathering," no doubt, from places further north.

The noise we make in ascending the ladder brings out another bird from beneath the tiled roof, which takes some such stand as the first we disturbed, it is however more restless and noisy, uttering its note of disquietude with an impatient shake of the tail. This is the Redstart, *(Phœnicura ruticilla,)* whose nest, if we choose to remove some of the tiles, we shall discover containing, it may be, six or more eggs smaller than those of the Hedge Warbler, but of the same beautiful blue colour. A hole in the wall, a hollow tree, and sometimes a hole in the thatch of an outhouse is chosen by this bird for the construction of its nest. I have found it in the hole perforated in an oak to the depth of two or three inches only by the Green Woodpecker. If unmolested it will bring up its brood in the same spot year after year.

We enter the building; when, with a loud shriek, one-third of alarm, another of indignation, and the remaining one of menace, a bird dashes almost into our very faces in its retreat; this is the Chimney Swallow, (*Hirundo rustica,*) whose nest we perceive on a moulding which runs round near the ceiling. We take a seat and perchance begin to discuss some point in the history of the bird, upon a specimen of whose handiwork our eyes are fixed. We shall however soon find it convenient to "move the adjournment of the debate," for assuredly we shall not be able to carry it on without constant interruption here, for every half minute or so, the bird will be popping in upon us, redoubling its cry of alarm, indignation, and menace.

Whatever the cause may be, it is an unquestionable fact that this bird occurs much more sparingly in this part of the country than it did some twenty years ago. May not this be traced in some measure to the treacherous nature of our late springs? I know that in the unusually severe weather we had in April, 1849, and again in 1851, after the arrival of these birds, they were found by hundreds, either starved to death by hunger, or killed by the severity of the frost, along the banks of the Isis. It was even said, and I have no reason to doubt the truth of the statement, that bushels of their dead bodies might have been collected within a comparatively short distance.

I have known instances of their having perished from a succession of cold wet days, even after the commencement of summer. They usually withdraw from this locality early in October, but at Brighton, and doubtless other places along the south coast, they may be met with far on in November.

On the occurrence of a cold and stormy day in summer, when the insect world has hid itself among herbage, in thatch, in crannies, and other places which may afford it shelter, these birds will assiduously attend the mower, as with measured tread he wields the keen-edged scythe, and, like time, slowly, but surely, sweeps down all before him; here a temporary supply of food awaits them in numerous *Phalenæ*, which are roused from their lurking places, and, like timid people, in the attempt to escape from an imaginary danger, rush into a real one; or as there would be some danger of their being cut by the blade of the mower if they remained in their place of concealment, the case of the oppressed and unfortunate Kaffirs in the late war would perhaps be more applicable, who, when the lighted match was applied to their tents, had no alternative but to perish in the flames, or by rushing out, all defenceless as they were, men, women, and children, to be struck down by the shot or steel of the enemy. To comment upon this war would be entirely out of place here; I must, therefore, refrain from doing so.

For the reason before stated, we leave the interior, and walk round to the back of the building, and casting our eyes up its walls, we perceive sundry small twigs projecting from behind some loose plaster, which has become detached from the face of the wall, but arrested in its descent, and prevented falling further by the clinging embrace of that strengthener and beautifier of old walls and ruins, the ivy. What a faithful and pleasing picture does the ivy-clad wall display to us, of the benefits to be derived from mutual support; the wall supporting, and thereby invigorating and enabling to mount heavenward the ivy, which must otherwise have remained grovelling along upon earth, (and this is precisely what education, when combined, as it ought in all cases to be, with religion, does for man,) the ivy giving additional strength to the wall, concealing its blemishes and defects, and rendering that which would otherwise have been an unsightly object, a picturesque and beautiful one.

We place the ladder and ascend to this nest, where we shall probably find the owner firm in her determination not to quit except by absolute force; we therefore gently exert that force, when she descends nearly to the base of some tree near at hand, and then commences an erratic and zigzag course up its trunk. We recognise in this movement the Common Creeper, (*Certhia familiaris.*) These birds, though generally dispersed over this part of the country, are by no means numerous; a solitary bird, or at most a pair, being only occasionally to be met with. Having selected a suitable locality for a home, they appear to me to reside there permanently throughout the year, and also from year to year. Around this home they make daily excursions in order to procure their daily food, searching for it behind the bark of trees,

and sometimes in crevices of old walls. They are furnished with much the same kind of tail as the Woodpeckers—strong and elastic, which supports them in their ascent of trees, walls, and palings; they do not perforate the bark like the Woodpeckers, and are therefore provided with a beak widely different in construction; being very slender, rather long, and considerably curved; which enables them to reach insects behind the bark, or round a slight angle, which, with a short and straight beak they would not be capable of doing. How beautifully is every part of every creature adapted to the respective habits of such creature! Throughout the whole of creation, even in its most minute portions, the marks of Infinite Wisdom are plainly visible. Nothing, however small, however apparently insignificant, but has these marks indelibly stamped thereon. Well may we exclaim with the Psalmist,—

"How manifold are Thy works, O Lord, in wisdom hast Thou made them all."

In the composition of the nest we find one rather odd sort of material, namely, small pieces of light decayed wood, commonly called touchwood. It is generally a very slight affair,—a few slender dry twigs, sundry pieces of the aforesaid touchwood, with the addition of hair and feathers as a lining. The eggs, five or six in number, are so like those of the Blue Titmouse, that one might easily be mistaken in their identity, although the ground of the Creeper's may be of a more shining white, and the specks a trifle deeper in colour than those of the Titmouse.

(To be continued.)

A NOTICE OF SOME OF THE BIRDS OCCURRING NEAR RICHMOND, YORKSHIRE.

BY H. SMURTHWAITE, ESQ.

(*Continued from page* 83.)

The following list contains the remainder of the birds which are found about this town; the number being, owing to the formation of the surrounding country, but scanty, and the species, generally speaking, not rare.

The Ringdove,) *Columba palumbus,*) is extremely abundant, chiefly inhabiting young plantations of firs and larches, placing its loosely constructed nest very frequently in the branches of the former tree, occasionally in a holly bush, and not uncommonly in a low yew or "ivy mantled" ash. The height at which the nest is placed from the ground, varies from four to twenty feet, but I am inclined to think eight or nine to be about the average.

The Pheasant, (*Phasianus Colchicus,*) and the Common Partridge, (*Perdix cinerea,*) are tolerably plentiful; I lately saw in the cabinet of a friend, a curious variety of the egg of the former bird; in colour it much resembled that of the Common Heron—bluish green, the surface very smooth and glossy, and the egg itself unusually rotund. The nest from which it was taken contained

eleven eggs, nine of the usual colour—tawny brown, and the remaining number resembling that above described; curiously enough, the last-named were so much cracked, (although freshly laid,) that the specimen belonging to my friend was the only one which could be preserved.

The Red Grouse, (*Tetrao Scoticus,*) is not rare, and numerous nests are annually discovered; the eggs of this species are for richness and variety of colouring equalled by those of no British Bird, with the exception perhaps of the Broad-billed Sandpiper, (*Tringa platyrhyncha.*) Whilst on the subject of eggs, it may perhaps be not amiss to warn young oologists (a rapidly increasing race,) against buying specimens from every dealer whose shop they may enter. Generally speaking it is quite impossible to rely on the eggs being authentic, and Mr. St. John was not far from the truth when he said that the dealers had "as many tricks as a horse jockey to dispose of their specimens;" the well-known "Great Auk fraud," must be fresh in the minds of most London oologists. My principal object in mentioning this was to bring forward the name of an individual who to most men of his profession is a bright exception; I mean Mr. J. Gardner, of 29, Great Marlborough Street, whom I consider quite unequalled for the cheap price at which he sells both stuffed birds and eggs, and in whose honesty I have the greatest confidence.

The Golden Plover, (*Charadrius pluvialis,*) is occasionally killed during the autumn and winter months, but never as far as I can ascertain, breeds with us.

The Lapwing, (*Vanellus cristatus,*) is very abundant, haunting during the breeding season, ploughed fields and waste land, but after hatching, retiring, with the exception of a very few individuals, to the sea-coast.

The Common Heron, (*Ardea cinerea,*) is sometimes observed standing in shallow parts of the river, deeply engaged in the pursuit of its finny prey, but specimens are seldom procured, and there is no heronry within many miles of Richmond.

Although by no means plentiful, the Curlew, (*Numenius arquata,*) may be generally seen on some of the tracts of moorland within a short distance of the town, and from such a locality I have had the eggs.

A specimen of the rare Green Sandpiper, (*Totanus ochropus,*) was recently killed at Killerby, a short distance from the town. Whilst conversing with one of the most eminent ornithologists of the present day, I was assured by him that the eggs of this species had never yet been found; but I find that in a sale of specimens which took place a short time ago in London, several eggs stated to be those of *T. ochropus*, were disposed of.

The Common Sandpiper, (*Totanus hypoleucos,*) is not very abundant, and any stragglers which remain to breed are generally shot by bird-stuffers.

The Woodcock, (*Scolopax rusticola,*) the Common Snipe, (*Scolopax gallinago,*) and the Jack Snipe, (*Scolopax gallinula,*) are all scarce, the last named especially, is very rarely seen.

The Common Coot, (*Fulica atra*,) breeds on some of the neighbouring ponds, but specimens are very seldom seen on the river, which is far too rapid to suit their taste, and besides this, is not bordered by those reeds and flags which are always found near the haunts of this species.

The Little Grebe, (*Podiceps minor*,) is occasionally observed during winter, but is only a very rare visitor with us.

The Common Tern, (*Sterna hirundo*,) and perhaps also the Arctic Tern, (*Sterna arctica*,) visit us at long intervals, generally before a severe storm, and the same may be said with respect to the Herring Gull, (*Larus argentatus*.)

Flocks of the Grey-lag Goose, (*Anser Ferus*,) pass over the town during the course of their annual migration, at very distant periods, and this I believe to be the only member of the family by whom we are ever visited.

The Wild Duck, (*Anas boschas*,) is abundant during the months of December and January, and the Teal, (*Anas crecca*,) is not uncommon, but the Wigeon, (*Anas Penelope*,) and the Pochard, (*Anas ferina*,) are very seldom observed.

A specimen of the Tufted Duck, (*Anas filigula*,) was seen swimming in the river in November, 1853; the person who observed it, considered it to be a young male bird.

The Red-breasted Merganser, (*Mergus serrator*,) is very rare with us; the Goosander, (*Mergus merganser*,) is somewhat more common; those which are procured are almost invariably females.

Richmond, March 3rd., 1854.

ON THE NAMES OF BIRDS IN THE NORTH-RIDING OF YORKSHIRE.

BY JOHN H. DAVIES, ESQ.

On looking through various lists of the local names of birds, I find that many of the designations employed by the inhabitants of this part of the country, still remain unrecorded. So that perhaps by inserting in "The Naturalist," a list of some of the more remarkable distinctive appellations that come under this head, I may be performing a useful service to some ornithologist, who might otherwise find himself puzzled by the intricacies of our primitive dialect.

The first given are the ordinary names; and those following are the names by which the species are known in this part of the country:—

Kestrel, (Red-backed Hawk.)
Sparrow-Hawk, (Perry-Hawk.)
White Owl, (Jenny Howlet.)
Blue Tit, (Billy Blue-cap.)
Long-tailed Tit, (Long-tailed Titty-mouse.)
Crow, (Dowp.)
Hooded Crow, (Blue-backed Crow.)

Magpie, (Nanpie.)
Jay, (Jenny Jay.)
Creeper, (Creepy-tree.)
Nightjar, (Gable Ratchet; so called because it ratches (i. e. hoots) on the gables of houses. Its cry is superstitiously believed to be the harbinger of death.)
Swift, (Dibbling.)
Pied Wagtail, (Willy Wagtail.)
Tree Pipit, (Bulking Lark.)
Black-headed Bunting, (Seave Cap.)
Yellow-Hammer, (Goldspink.)
Chaffineh, (Bullspink.)
Sparrow, (Spag and Spadger.)
Green Finch, (Green Lenny.)
Linnet, (French Lenny.)
Bullfineh, (Bullfinch and Bully.)
Starling, (Ship Starling.)
Missel Thrush, (Thrush.)
Thrush, (Throstle.)
Fieldfare, (Fellfer.)
Blackbird, (Blacky.)
Dunnock, (Cuddy and Hedge-creeper.)
Redstart, (Lenny Redtail.)
Whitethroat, (Peggy Whitethroat.)
Lesser Whitethroat, (Mealy mouth.)
Wren, (Tricker, Jenny Wren, and Tommy Tit.)
Golden-Crested Wren, (Fireerown.)
Wood Pigeon, (Cowseot and Cowshot.)
Lapwing, (Teafit.)

Thirsk, February 27th., 1854.

ORNITHOLOGICAL NOTES.

BY MR. CLEMENT JACKSON.

Marsh Harrier, (Circus rufus.)—Having perused with much interest Mr. A. Strickland's note on the migration and change of plumage exhibited by the Marsh Harrier, as detailed in Morris's "British Birds," vol. i., page 162; and as this species in common with all large predaceous birds, is now of rare occurrence here, the following notice of a male specimen brought to me on the 28th. of December, 1853, may be worth recording:—

It was shot a few days previously on the moors, a few miles from Liskeard, during very severe frost, late in the evening, as it rose from a ditch where it had probably been discussing its last meal. The stomach was filled with the remains of a Teal and a Thrush, torn in small fragments, and well plucked, as comparatively few feathers were swallowed, the beak and legs alone identifying the owners. It was in good flesh and feather, and measured about twenty inches from beak to end of tail; spread of wings four feet two inches. Irides, dark brown; primary quills, dark; secondaries, grayish brown; tail, gray. Head, neck, and body, above and below, dark brown, with a few lighter markings around the beak and facial disk; wing coverts, dark brown, with some old worn feathers, evidently the remains of summer plumage, scattered over them: these appear to have been light brown or straw-colour; their faded and worn tips are very conspicuous on the new dark brown plumage, exhibiting a marked difference in colour from the summer livery, and confirming Mr. Strickland's conjecture respecting the autumnal change.

The Blackstart, (Phœnieura Tithys.)—Two or three Blackstarts were observed flying about our hill on the 4th. of November, and we noticed several during November and December, all in similar plain plumage. The only adult male in mature plumage I have yet met with was shot on the 16th. of November, 1846. Do the young males retain their plain garb till the ensuing spring?

East Looe, February 21st., 1854.

BRITISH EVERGREENS.—No. 4.

BY. J. MC'INTOSH, ESQ.

(Continued from Vol. III., page 248.)

Hèdera, (*The Ivy,*) Pentandria Monogynia.

"Dark creeping Ivy with thy berries brown,
That fondly twists on ruins all thine own."

Hèdera Helix, L.—The common Ivy is a free-born shrub to every country of Europe, from the south of Sweden to the Mediterranean Sea, and from Ireland to Siberia. It is also found in the north of Africa, in Asia, on the mountains of India, Japan, and in China; it does not exist in America or in Australia, except by cultivation. Kalm says that he saw Ivy but once in North America, against a stone building, and conjectures that it had been brought from Europe, and planted there. Royle says that the variety with yellow berries, (*Hedera Helix chrysocarpa,*) is the most common on the Himalayas, and may be seen clinging to the rocks, or clasping the Oak. Thunberg, who first observed it in Japan, remarks that the leaves are not lobed. The Ivy was well known to the Greeks and the Romans; its Greek names were Kissos and Kittos, from Kissos or Cissus, the name of a boy whom Bacchus is said to have changed into it. By the Romans it was called Hedera, which name it still retains. Ovid gives it the very appropriate epithet of *"flexipes,"* (Met. x. 99,) twiny footed. Virgil calls it wandering or straggling "errantes ederas, (Eel. iv. 19.) Catullus describes its manner of growth with great beauty of language.

"As clasping Ivy shoots its sprays
Around the tree in wanton maze."—lxi. 34.

Horace gives a similar representation of it—

"More close than Ivy girds the lofty oak,
With pliant arms adhering."

And Ovid adds the circumstance of its forming knots by the reflection of its branches, and likewise mentions its bunches of berries—

"The oars by loops of creeping Ivy bound
Are held; its clusters fill the sails around."—Met. iii. 664.

The ancients held Ivy in great esteem; it was consecrated to Bacchus, who

is represented as crowned with it, and it was often twined with the laurel and the vine, in the poets' wreath. Milton speaks of "the Ivy crowned Bacchus." And Pliny informs us that it was the yellow fruited which was consecrated to the god of wine, and also destined to crown the poets. When Bacchus was seized by the pirates, his presence was made manifest by many wondrous changes that took place in different parts of the vessel, which Leigh Hunt thus translates from Homer—

"For first a fountain of sweet smelling wine
Came gushing o'er the deck with sprightly shine,
And odours not of earth, their senses took;
The pallid wonder spread from look to look:
And then a vine tree overran the sail,
Its green arms tossing to the pranksome gale
And then an Ivy, with a flowering shoot,
Ran up the mast in rings, and kissed the fruit,
Which here and there the dripping vine let down:
On every oar there was a garland crown."

Homer also describes his heroes as drinking out of a cup made of Ivy wood. The beechen-cup of Alcimedon had a lid of Ivy carved with grapes—

"The lids are Ivy; grapes in clusters lurk
Beneath the carving of the curious work."
DRYDEN'S VIRGIL.

It is related that when Alexander's army, after their conquest of Babylon, arrived at the mountain of Nyssa, the reputed birth-place of Bacchus, and found it covered with Laurel and Ivy, they were so delighted that they tore up the Ivy by its roots, and, twining it round their heads, burst forth into hymns to Bacchus, and prayers for their native country. The Greek priests presented wreaths of Ivy to newly-married persons, as a symbol of the closeness of the tie which bound them, as man and wife, together. Ptolemy Philopater, king of Egypt, ordered all the Jews who had abjured their religion to be branded with an Ivy leaf. The Ivy has always been considered symbolical of friendship, from the closeness of its adherence to the tree or ruin on which it has fixed itself. "Nothing," says St. Pierre, "can separate it from the tree which it has once embraced; it clothes it with its own leaves in that inclement season when its dark boughs are covered with hoar-frost. The faithful companion of its destiny, it falls when the tree is cut down; death itself does not relax its grasp, and it continues to adorn with its verdure the dry trunk that once supported it."

———"When the oak denies her stay,
The creeping Ivy winds her humble way;
No more she twists her branches round,
But drags her feeble stem along the barren ground."
LLOYD.

Spenser gives the following delightful picture of its embraces:—

"Emongst the rest, the clamb'ring yvie grew,
Knitting his wanton arms with grasping hold,
Least that the poplar happely should rew
Her brother's strokes, whose boughs she doth enfold
With her lythe twigs, till they the top survew,
And paint with pallid green her buds of gold."

SPENSER'S VIRGIL'S GNAT.

The Ivy has certainly a very beautiful and picturesque appearance upon old buildings, where it is often seen hanging in luxuriant and heavy masses; as on the ruins of old castles, abbeys, churches, rocks, and stumps of trees. It may often be seen growing in a soil that received no preparation from man, with nothing to cling to but basaltic rocks; yet one column of rock after another is surmounted: but it does not stop there—it scales the walls and pushes onwards (in fact its motto is 'onward—onward,') until its evergreen flag waves in the breeze, and in the storm upon the ramparts.

"High from the fields of air look down,
Those eyries of a vanished race;
Where harp, and battle, and renown,
Have passed and left no trace.
But thou art there serenely bright,
Meeting the mountain's storms with bloom;
Thou that wilt climb the loftiest height,
Or crown the lowliest tomb;
Ivy, Ivy, all are thine,
Palace, hearth, and shrine."

MRS. HEMANS.

And Keats says of it—

"The little chapel with the cross above,
Upholding wreaths of Ivy."

We do not know a plant which claims more particular notice than the Ivy. This "rare old plant," as Dickens has sung, is not to be surpassed in point of utility. Its viridity is perpetual; when all around it may be bleak and bare, the Ivy appears fresh under every circumstance, and clothed in its sombre beauty. In the pleasure-ground it cannot be dispensed with, for nothing else can so effectually turn the bare hollow trunk into an object of beauty. As a plant adapted for an ornamental fence or screen, it is fairly unrivalled; it only requires the partial support of a few slight stakes, or a rudely-constructed lattice, and in a short time it covers the whole in the most graceful manner, completely shutting out the view on either side. For covering walls or buildings, too, there is nothing to be compared to Ivy; and it has this great merit, that no other plant usually employed for such a purpose can so effectually preserve the masonry from that dampness and decay which inevitably follow exposure to rain and beating winds; and which frequently render detached dwelling-houses quite unhealthy. On this subject we find a correspondent of the "Paper-hanger's and Upholsterer's Guide" says—"The last thing I have to mention on the subject of damp relates to Ivy on exterior walls of buildings; its effect on walls is, that if it does not

entirely eradicate damp it may be admitted to be a repellant placed on the exterior. I had my attention drawn to a case of this description where damp had prevailed for a length of time in the walls of an apartment; but Ivy having grown up to cover the opposite exterior side, the affected parts inside had become dry."

A Rural Dean contends that, "So far from Ivy rendering the structure damp, and so hastening its decay, nothing so effectually keeps the building dry, as may be seen by examining beneath the Ivy after rain, when it will be found that the walls are dry, though everything around is deluged with wet." "And further," he says, "its exuberant and web-like roots, issuing, as they do, from every portion of the branches, and running all over the surface on which it grows, binding everything together that comes within their reach with such a firm and intricate lace-work, that not a single stone can be removed from its position without first tearing away its protecting safeguard. In those parts of the structure that have not had the advantage of this protection, all has gone to utter decay. Where the Ivy has thrown its preserving mantle, everything is comparatively perfect and fresh, and often times the angles of the sculptured stones are found to be almost as sharp and entire as when first they came from the mason's yard."

About London, and other large cities, it is raised in the nurseries in large quantities in pots, to form external framing to the windows of houses instead of architectures, and for placing in balconies. In rooms, also, the Ivy may be planted in boxes; and, when properly treated, forms a most beautiful rustic screen; is then for excluding the light of the sun by day, or that of lamps by night; also to conceal or disguise any disagreeable objects that may present themselves, and create an allusion to the country. A variety of opinions exist as to its injurious properties to timber trees for sale—some writers contending that it is highly injurious to them, while others as strongly contend that it is beneficial. That it is not injurious to trees, we are perfectly satisfied in our own mind, having had large quantities of timber trees covered with it to the summit of their branches, cut down, and sawn into planks, and have never found the timber in the least injured by it, but on high and exposed places greatly benefited by it; in which situations few objects are more picturesque than the trunks of large trees verdant with this "rare old plant." *Sheep* are very fond of Ivy, and in severe weather it is a warm and wholesome food for them; therefore the shepherds in many places in winter cut down branches for their flocks to browse on. Cato directs that cattle should be fed with it in scarcity of hay. *Deer* also are particularly fond of its leaves; for the use of the latter the park walls should be planted with Ivy, thereby insuring an additional amount of food to these animals during winter; also ornamenting the walls, and protecting them against the ravages of time, remembering that—

> "Our Ivy-crowned turrets, the pride of past ages,
> Though mouldering in ruins, do still grandeur impart."

The berries are attractive to many of our early spring birds, and its dense foliage affords an excellent situation for the nests of the Blackbird, Thrush, Wren, Blackcap, Sparrow, Tomtit, Robin, Jay, Wood Pigeons, Owls, Jackdaws, and the various Finches. Ivy was formerly included in the English *Materia Medica*, as it was in that of the Greeks, and still is in that of India. The berries are caustic and purgative, and the substance which is called hederine, which is now in use in India, is said to be aperient, resolvative, and balsamic. The wood is soft and porous, and in the south of Europe it is used by the turner. The roots are employed by leather-cutters to whet their knives on; and curiously-polished cups, boxes, and also tables of great value are made from them. A decoction of the leaves dyes hair black, and it is said to form a principal ingredient in the composition sold to prevent hair from turning grey.

The Common Ivy is a well known plant, unjustly considered parasitical. In its infant, or very youthful state, it has spear-shaped leaves, and bears neither flowers nor fruit, and was called by old botanists, *Hedera humi repens*, (Ivy creeping on the ground.) At a more advanced state it bears five-lobed leaves, climbs on trees and walls, and is barren: in this stage it was called *Hedera major sterilis*, (Greater Barren Ivy.) In its next, or more mature state, it sends forth three-lobed leaves, rising above its supports, and flowering; it was then called *Hedera arborea*, (Tree Ivy;) but when old its leaves are entire, and it was known as the *Hedera Poetica*, or Poet's Ivy. After this the branches with old age droop, grow dry, wither, and become covered, as well as the trunk, with moss; first one branch decays, then another, till the whole tree moulders away, and "the place thereof knoweth it no more."

The following list contains the species and varieties at present known, though there are more than fifty other species described in "Dons Miller," vol. iii.; they are, however, trees from the tropics, and belong to the genus *Aralia*:—

Hedera Helix.—Common Ivy. In Pantglass Park, South Wales, there is the famous Ffynongoleh Ivy growing on an oak tree, with a straight stem, six feet in length, and three feet in circumference: the stem of the Ivy is independent of the stem of oak, with deeply furrowed bark, like an oak. On a cottage, in the town of Morpeth, Northumberland, there is, or was, a fine specimen, considered to be nearly a century old. At Great Canford, in Dorset, there is a magnificent specimen, covering the beautiful and interesting old kitchen of John of Gaunt, which must be more than a century old. Robert Bloomfield tells us that the largest Ivy he ever saw was at Ragland Castle, which he says "set iron and stone at defiance."

Of varieties of *Hedera Helix* we have the following, which are to be found in the nurseries and gardens:—

Hedera Helix vulgaris.—This is the commonest form of the Ivy throughout Europe in a wild state.

Hedera Helix Canariensis.—This is the Giant or Irish Ivy, and the *Hedera Canariensis* of Willo. A native of the Canary Islands, but when introduced into Britain is quite uncertain. Of varieties of *H. Canariensis* there exist the following:—

" " Canariensis hora.—A small palm-leaved variety, with the veins of the leaves white—rather slender in growth.

" " Canariensis variegata.—This is the common variegated Irish Ivy, one half of the leaves are yellowish, and the other quite green.

" " chrysocarpa of Dec.; *H. Poeticus*, C. Bauh.; *H. chrysocarpus*, Dalech.; *H. Dionysis*, J. Bauh.; *H. Helix*, Wall. This variety differs from those already described in having yellow berries, and being of a stronger growth. Virgil speaks of a white-berried Ivy; but Tournefort considers it was our present subject, and says, "that it is not surprising that the Bacchantes should formerly have made use of these, the *H. H. chrysocarpa*, to adorn their heads, since all Thrace is covered with this plant."—Vol. ii. page 246.

" " Rægneriana.—This is a distinct and new variety; its foliage is totally unlike that of any other Ivy. The leaves are entire, and of great thickness, while a peculiar gloss unmistakeably distinguishes it from all the others. This valuable Ivy should be cultivated in preference to any other.

" " Taurica.—This pretty Ivy is of an opposite character to the last, having the foliage small and compact.

" " digitata or palmata.—The palm or hand-shaped leaved Ivy. The foliage of this variety resembles the human hand, hence its name. All the leaves have not this character, but as the plant advances in age it is more observable. It is a pretty and distinct variety.

" " foliis argenteis.—Silver-striped Ivy. Rather a delicate grower when compared with the others; the leaves are margined with white, edged with pink.

" " foliis aureis.—Gold-striped Ivy. This is a larger foliaged, and more robust grower than the last; it is also known in the nurseries and gardens as Pontey's Golden-blotched Ivy.

" " arborescens.—Tree Ivy. This is nothing more than the flowering shoots of the *Hedera Helia* cut off and rooted, and grown as a separate plant, forming an upright bush or small tree, which character it retains for some years, but it soon resumes its native habit, and throws out creeping shoots like the Common Ivy.

Having enumerated all the species and varieties of *Hedera Helix*, we must now conclude our description of this "rare old plant," and, in the words of the Village Minstrel, Clare, say—

"But, bloom of ruins, thou art dear to me,
When, far from danger's way, thy gloomy pride
Wreathes picturesque around some ancient tree,
That bows his branches by some fountain-side.
Then sweet it is from summer suns to be
With thy green darkness overshadowing me."

5, Middle-Street, Taunton, October 21st., 1853.

Miscellaneous Notices.

Occurrence of the Rose-coloured Pastor, (Pastor Roseus,) *near Glasgow*.—My friend, W. C. Alston, Esq., has politely sent me for inspection two specimens of this beautiful bird, male and female, which were shot in July last on his property, Rosemount, near this city. They had been seen for some days frequenting the garden, and were in excellent plumage. It is a matter of great regret that interesting strangers like these should be mercilessly destroyed on appearing amongst us; for so long as such persecution continues, we can never hope to see their numbers increase. Rollers, Waxwings, Hoopoes, etc., have been all killed within a mile of the city in the same manner, and their murders duly recorded; while the same ends would have been gained to science had the poor birds been allowed to live, and their appearance simply commented upon.—H. Colquhoun, M. D., 3, Kew Terrace, Glasgow, March, 1854.

We quite agree with Dr. Colquhoun's remarks. We cannot even understand the temptation to kill rare species of any zoological object in this country, if it be a well-known and common species elsewhere. For our own part, were we shewn a large series of either birds or insects, *rare as British*, we should in all probability select continental specimens in preference to those taken in this country, as they would undoubtedly be more valuable when captured within the limits of their geographical distribution, than after having been tarnished by the fatigues of emigration, or otherwise. The philosophic naturalist, if he collects birds, for instance, would gladly receive an example of a species from any part of the world; or if that species were cosmopolite, he might wish a series from various parts to shew the variety of plumage produced by difference of climate, etc.; but as regards poor stragglers to our ungenerous shores, we believe they would excite no interest in him beyond a feeling of pity for their fate.

The Red Grouse, (*Tetrao Scoticus,*) is the only bird in the British Islands which is peculiar to their Fauna; and when its numbers, already rapidly diminished, become still more so by the annual persecution to which it is subjected, we expect to see eager collectors taking the field on the "12th.," vainly searching for the extinct Gor-Cock.—B. R. M.

Notes on the Tree Creeper, (Certhia familiaris.)—In April, 1852, a pair of Tree Creepers began a nest in a wooden building erected in a plantation behind the cottage where I am residing, but, as there was daily some one going into the place, they were scared away, and left their nest unfinished: this, considering the natural shyness of the bird, was not to be wondered at. They must, however, have built somewhere near, as I saw them constantly about the plantation during that spring. The unfinished nest remained for the rest of the year just as the birds had left it; I took no more notice of it until last spring, (1853,) when one day seeing on the floor more twigs, etc., than I had previously observed, I looked up, expecting to find that the old nest had fallen down, but, to my surprise, I found that it had been recommenced, and was nearly completed. This time the birds did not take fright, but, after a few daily visits from me, became quite accustomed to my coming in, and continued their work during my presence without showing any alarm. On the 19th. of May there were six eggs in the nest, all of which were hatched by the 5th. of June, the birds having commenced incubation on the 21st. of May. The young left the nest on the 20th. of June, from which time I have seen nothing of them, either old or young, except on the 4th. of September, when I saw one bird of the species, but whether of the same *family* or not, I cannot say. The outhouse where they built is made of overlapping deals; between one of these and the upright was the hole where they entered. A

young oak tree grows at the side of the shed, and I found that the birds, in going to their nest, invariably alighted on the lower portion of this tree, and climbed up the stem, until they were opposite their entrance, when they flew direct in; they never on one occasion out of the many times I observed them enter either flew into the hole from any other tree, or climbed up the side of the building itself. So familiar did they at last become, that, with caterpillars in their bills for their young, they would climb up to their nest on one side of the tree, while I was leaning on the other.—C. M. O., Glencorse Cottage.

Note on the Hooded Crow, (Corvus cornix.)—The following curious circumstance has just been related to me by a gentleman in this neighbourhood:—One day last month, while walking near the salt marshes that border this coast, he observed a pair of these birds chasing a small species of *Grallidæ*, I believe a Dunlin, *(Tringa variabilis,)* which they knocked down, killed, and afterwards devoured. I should be glad to know if any of your readers have observed a similar instance.—C. H. Dashwood, Thornaye, Norfolk, March 10th., 1854.

I was in hopes that the last month would have produced accounts of the capture of many scarce birds, but inquiries among my ornithological friends have confirmed my own observation in that respect, that, though the winter has been unusually severe, there has been a great scarcity of the rarer occasional visitors to this country; the Natatores no doubt were completely frozen out, and retired from their inland winter haunts to the sea-coasts. The only strangers I procured, (very common in many localities, but only seen by myself once before in this parish,) were specimens of the Mountain Finch, *(F. montifringilla.)* Of these large flocks remained during the storm, feeding about some retired corn-stacks, and under the shelter of some neighbouring beech trees, to the mast of which, according to my friend, the Rev. F. O. Morris, in his "History of British Birds," they are partial.—R. P. Alington, Rectory, Swinhope, Lincolnshire.

Little Auk, (Alea alle,) *near Northampton*.—Mr. T. Dickens, the animal preserver of this town, purchased on Saturday last, a Little Auk. It was found dead upon the ice in the lordship of Great Houghton, about two miles from this. He is also stuffing a young Kittiwake, *(Larus tridactylus,)* killed at Pattishall, in this county, during the frost. He has preserved two fine specimens of Pied Blackbirds, *(Turdus merula,)* killed at Lord Spencer's seat at Althorp.—W. Brooks Gates, Derngate, Northampton, in a letter to the Rev. F. O. Morris, January 23rd., 1854.

Skeletons.—My method of preparing skeletons of small quadrupeds and birds is the same as that many years ago practised by Sue, also by Daubenton, and many others, by first boiling the object in water, and then throwing cold water upon it by the force of a syringe. By this simple process the flesh is soon detached from the bones, which remain perfectly clean. If any flesh remains, which is often the case, I use a sharp knife and scrape it off. By this method I have preserved the heads of the following animals:—The Horse, Ass, Ox, Badger, Fox, Cat, Dog, Boar, Wild Boar, young Deer, Fallow, and Roe, Dormouse, Hare, Hedgehog, Mole, Rat, Mouse, Otter, Squirrel, Stoat, Rabbit, and Bat; with about one hundred of the skulls of birds. Specimens of which I will be pleased to send you, should you wish them.—J. Mc' Intosh.

A White Variety of the Common Mallow, (Malva sylvestris.)—Last July I found a pure white variety of this plant. It was growing on a dry sandy bank, with a great many of its purple brethren, which it exactly resembled, with the exception of the flowers being white.—C. H. Dashwood, Thornaye, Norfolk, March 10th., 1854.

Orchidaceæ with White Flowers.—I beg to send you a list of the Orchidaceæ, which I have found round here, with white flowers.—Orchis morio, O. maseula, O. pyramidalis, O. latifolia, Gymnadenia conopsea, Ophrys muscifera, and O. apifera. Most of these I could to a certainty find with white flowers almost any day in the season, if required. All of them I have at different times brought home with roots, and have had them in flower in the garden. Whether they will again come up white, remains to be seen. Several other plants not unfrequently flower white round here. In many places the chalk is covered with a very slight soil, and I suppose that the absence of material, from which the plant can elaborate colouring matter, must be the explanation of the frequent occurrence of this 'lusus' in this locality.—J. L. J. Winchester.

Proceedings of Societies.

Royal Society of Edinburgh.—On Monday evening, February 6th., 1854, a paper was read by Professor Bennet, being "Observations on the structure of the Torbanehill mineral, as compared with various kinds of coal." Dr. B. explained the nature of his investigations on this subject, which were chiefly confined to a very careful examination, by the microscope, of the Torbanehill mineral, and of all the different kinds of coal, including those kinds to which the Torbanehill mineral was said to be allied. He was clearly of opinion that the Torbanehill mineral was a substance quite distinct from coal, and not to be confounded with it by any one who paid strict attention to the microscopical characters of the two substances. By the aid of a series of elegant drawings, he explained the peculiarities of the different kinds of coal, and pointed out the structure by which the Torbanehill mineral is distinguished. Coal he believed to be formed by coniferous wood, and the structure which coal exhibited under the microscope accorded with this idea; but, in the Torbanehill mineral, the wood fibres of Coniferæ were not seen. He particularly referred to certain bodies of a circular form, which were seen in transverse sections of all true coals, when examined under a high magnifying power. These bodies he considered to form the true mark of coal, and he had never failed to find them in any specimens of true coal. But in the Torbanehill mineral they did not occur, and their absence showed it not to be a kind of coal, but a mineral having a different origin.

The bodies or appearances in question were considered by Dr. Bennet to be the ends of woody tubes, and in this manner he endeavoured to show that true coal is necessarily made up of such, the tubes being in all cases those of coniferous wood. He also directed attention to the characters afforded by the presence or absence of tissues in the ashes of coal and substances with which coal was apt to be confounded. In some cases coals did not exhibit their organic structures until they were submitted to partial combustion; hence in the ashes of coals generally, the wood-cells (Coniferæ,) of which the coal had been formed, could be easily traced. The Torbanehill mineral was remarkably different in this respect, for although its ashes had been very carefully examined, no traces of organized structure could be detected in them; and on this part of the subject, as on several others, Dr. Bennet specially referred to the investigations of Mr. Quekett, as detailed in the "Transactions of the Microscopical Society." Dr. Bennet stated that those bodies which had been called "cells" in the Torbanehill mineral, did not exhibit the character of cells; they were merely spherules of bituminous matter; and the fact that they polarized light was sufficient evidence of their not being vegetable cells. The bituminous matter, moreover, was stated by Dr. Bennet to be the same as that found in Binny quarry, which was there used by the workmen for illumination, and he exhibited a specimen of the substance. He then proceeded to inquire into the nature of the organic structure seen in the Torbanehill mineral. There could be no doubt about the fact that such structures occur in the mineral; namely, the scalariform ducts of cryptogamic plants; but when such a specimen occurred, it was merely accidental, and no more to be regarded as entitling the mineral to be called vegetable, than the occurrence of a fossil bone or tooth in a rock entitled it to be called animal. That the scalariform vascular tissue could not belong to Coniferæ was proved by the fact, that no Coniferæ in this country exhibit cross fibres in their wood cells. Even if it were granted that the yellow bodies in the mineral had the character of vegetable cells, and that the ducts, occasionally found amongst them, were the tissues of the same plants, Dr. Bennet considered it impossible to conceive a plant having such a superabundance of cellular tissue with such a paucity of vessels; for the latter would be quite inadequate for the nourishment of the former, and with such a structure of course, the plant could not exist. It was, therefore, clear that the Torbanehill mineral was not a fossil plant.

Dr. Bennet exhibited a series of specimens to show the manner in which the Torbanehill mineral was sometimes intermixed with coal,—thin seams or layers of coal running through the mineral, both, however, always retaining their characters unaltered. Such specimens, he thought, were likely to give rise to error in observation, as under the microscope an accidental fragment of coal might be looked at instead of the proper mineral. If observers were, in all cases, careful to guard against this source of fallacy, they would have no difficulty in distinguishing the Torbanehill mineral from coal. For the purpose of showing the view taken of the

microscopical evidence at the trial, Dr. Bennet read some remarks from the Lord President's address to the jury, and took exceptions to some of them:—

"The pursuer's witnesses told you that there was no trace of organic structure, no woody fibre nor tissue, in short, no trace of vegetable matter in this substance, although occasionally there might be the incidental presence of vegetable remains. The witnesses on the other side told you, on the contrary, that in every part of it there were the most clear vestiges of vegetable structure. I do not know when I have so many geologists and so many microscopists telling me that it is not coal, and so many on the other side telling me the opposite,—I say that I do not know that I feel myself much the wiser, or further advanced in the inquiry. But if you have, in addition, a great number of chemists, and speaking with equal authority and equal contrariety, it is difficult to know what to make of the controversy. I do not know that I have anything to say against the skill of the microscopists, or the skill of any of those gentlemen; but one general remark may be made on the microscopic testimony, and it is that there are those who see a thing, and also those who do not see it—those who do see it cannot see it unless it is there, and those who cannot see it do not see it at all. But very skilful persons looking for a thing and not seeing it, creates strong presumption that it is not there. But when other persons do find it, it goes far to displace the notion that it is not there. But there is another observation on the microscopic evidence that occurred to me. I do not know whether I am under any misapprehension, but I think that three, certainly two, of those examined by the defenders are botanists also; and I do not think that any of those examined for the pursuer, two of them from London, represented themselves as botanists. Now, the defender's witnesses are accustomed to look for plants, and can understand them when they see them. The gentlemen on the other side, again, looking for woody fibre or tissue, are not, as I understand, conversant or skilful in fossil plants. But finding such a difference of opinion, and such opposite conclusions arrived at by those persons, I do not know, unless you think that some gave their reasons more satisfactorily than others—I say that I do not know that I feel my mind much relieved from the difficulties of the case by listening to all that evidence."

In allusion to the above remarks. Dr. Bennet stated that the differences in the results of the observations of the witnesses on both sides of the case were more apparent than real,—the fact being that both had seen the same thing, but had interpreted it in different ways, so that the extraordinary circumstance of the defender's witnesses finding plants where the pursuer's could see none was at once explained, without having recourse to the assumption, that the latter did not know plants when he saw them. It was the globular bituminous bodies that gave rise to the difference of opinion; the defender's witnesses regarded them as vegetable cells, while those for the pursuer did not believe in their vegetable origin. Without drawings it is impossible for us to enter more fully into the details of facts relative to structure, etc., of which Dr. Bennet's paper chiefly consisted; but this is not desirable, as the paper will, no doubt, appear at full length in the "Royal Society's Transactions," or some other scientific publication. Not so, however, with the discussion which followed the reading of the paper,—no such record is likely to be made of it, and we therefore deem it important to occupy this vacant ground, by reporting as fully as possible the opinions expressed by the various members who took part in the debate.

The President having called for the opinions of members, Professor Balfour rose, and entered at great length upon the subject. While regretting that so much of the Royal Society's time should be occupied in the discussion of this *questio vexata*, he had hopes that the candid spirit in which the subject had hitherto been discussed, would continue to mark the Society's proceedings, and eventually lead to the discovery of the truth. He stated that it was impossible to give an accurate definition of coal, which included many varieties of combustible material formed from plants. Much depended on the nature of the plants, the pressure and heat to which they had been subjected, the length of time which the deposit had taken to form coal, and the degree of admixture of earthy matters. There was a gradual transition from anthracite to parrot coal. Coals having an illuminating, gas-giving property, seemed to contain a peculiar yellow matter, but this matter was very variable in its proportions, being much larger in Boghead gas-coal, and in Methil parrot, than in ordinary household coal; hence the value of the two former in the manufacture of gas. The yellow matter appeared to be of vegetable origin, and to have been formed from coal plants. It contained a considerable amount of carbon, and had been deposited in circumscribed cavities of different kinds. In considering the structure of

coal, Dr. Balfour thought it well to examine the plants which formed the flora of the coal epoch; these were chiefly Acrogens and Gymnosperms, the former predominating. Of five hundred coal plants mentioned by Brogniart, three hundred and forty-six appeared to have been Acrogenous species, and one hundred and thirty-five Gymnosperms. He alluded to the remarkable character of the fern flora of the coal epoch, which resembled that of islands such as New Zealand, where the ferns were described as social plants, forming forests, to the exclusion of other plants. The Acrogens in structure displayed a large quantity of cellular tissue, some prosenchymatous tissue, and scalariform vessels. In many of the coal plants allied to ferns the texture was described as loose, the vascular tissue only occurring at certain definite spots, and the transverse and longitudinal section of the cellular part of the stem being nearly similar. This Acrogenous flora seemed to have contributed to the formation of coal, specimens being in fact seen in which stigmarias and sigillarias were actually formed into coal. Gymnosperms, no doubt, also contributed, but Dr. Balfour thought it by no means proved that they were the only plants that did so, facts seeming rather to lead to the conclusion that both Acrogens and Gymnosperms had contributed to form coal, and that, as in peat at the present day, cellular plants might also have been mingled with them. In one coal basin certain tribes of plants might predominate, in another basin a different tribe, and thus arise different varieties of coal.

While a certain similiarity of structure existed among the parrot coals, the brown, Methil, and the Boghead gas-coal appeared to occupy a special position, being very similar in appearance and qualities, and both containing a large amount of yellow matter deposited, apparently, in an organic basis, consisting of circumscribed cavities of different sizes, which might possibly be altered cells. It was impossible to demonstrate the cellulose of the cell wall, and no one would expect, as Dr. Bennet had hinted, to find the primordial utricles and nuclei in such circumstances, the changes induced having altered the cell contents. and their place being now occupied with yellow matter. The Methil coal was stated to belong to the same seam as the Wemyss parrot coal, which differed from it in many respects, thus showing that varieties occur even in the same bed. These varieties might be traced to peculiar local floras, or to chemical and mechanical causes of various kinds, which induced alterations in the cells and their contents. The quantity of carbon in the Boghead coal was said to be small, but in making the calculation, the yellow matter had been discarded, which, as a product of the coal plants, it ought not to have been. In Methil coal the amount of carbon, when similarly estimated, was also small; the chemical analysis of brown Methil and of the Torbanehill coal being very similar; nor was it easy to separate them by any definition. He therefore regarded them as mere varieties, varieties, however, which a practised eye might be able to discriminate by the microscope, as Dr. Bennet had stated, but this did not militate against their being mere varieties. Besides the yellow matter, the Torbanehill mineral contained scalariform tissue, sometimes entire, sometimes broken up in the same way as Corda had figured the tissue of stigmaria. Dr. B. thought that the vegetable tissue did not appear to be a mere accidental admixture, but to be in reality part of the Acrogenous plants which helped to form the coal. The existence of the tissue at certain points only might be expected in coal formed of such plants, and the presence of peculiar inflammable matter was by no means uncommon among ferns and Lycopodiaceæ of the present day. In coals there were found certain brownish rings, which Dr. Bennet considered to be characteristic, and to be the cut extremities of tubes; they had not, however, been traced. If tubes, they must be similar to the dotted ducts, and not to the woody fibres, and this would tend to prove that the tissue was not that of Coniferæ.

Dr. Balfour was disposed to look upon these rings as being sections of sporangia or spores, and similar bodies had been seen in most coals, and among others in the Torbanehill coal. [Dr. Bennet, however, denied that they were spore cases or seeds, as they were of a different size from such bodies, as usually seen in coal.] Professor Balfour thought that the amount and nature of the tissue required to constitute coal had certainly not been determined. In the coke of the Torbanehill coal, Mr. Quekett had found a considerable amount of vegetable tissue. This seemed to be an important fact which had been omitted by Dr. Bennet. [In reply, we understood Dr. Bennet to say that he had not been able to corroborate the fact.] In regard to the occurrence of structure in the ashes, Dr. Balfour thought that little stress could be laid upon it, as much depended upon the extent to which the coal was burnt; and the inflammable nature of the Torbanehill coal might cause the combustion of the tissue to be more complete than in other coals. In conclusion he stated that he considered the Torbanehill coal to be a cannel coal, nearly

allied to brown Methill, formed from Acrogenous plants, containing scalariform tissue, and an abundance of vegetable yellow gas-giving matter apparently the altered contents of cells.

Professor Gregory approved, in general, of the observations of Professor Balfour, and alluded to some of the more special points in which he concurred. He then proceeded to consider the subject briefly in its chemical aspect, in the first place noticing the changes in the plants' tissue that were probably induced during the process of their transformation into coal. Coal was believed to be formed of vegetable matter, (the remains of plants,) in various ways, but chiefly by a kind of fermentation taking place under great pressure. This would, of course, cause changes in the cells and their contents, and probably the yellow inflammable matter was one result of the process. In regard to that matter, which was, perhaps, more a resinous than a bituminous substance, he thought Dr. Bennet was in error when he said that it was identical with the inflammable bituminous matter used in Binny quarry. The Binny substance was quite soluble in naptha, but no chemist had been able to say the same in regard to the yellow matter of the Torbanehill mineral. With respect to the general chemical characters of that mineral it did not differ in any essential point from Methil, and, perhaps, some other kinds of undoubted coals.

Dr. Wilson remarked that while Dr. Bennet had confined his paper chiefly to the peculiarities of the Torbanehill mineral, Dr. Balfour had gone farther, and taken up the whole question as to its relationship with different kinds of coal. Dr. Wilson submitted, however, that the question before the meeting was not so much between the Torbanehill mineral and coal, as between coal and bituminous shale, for the Society would be well aware that bituminous shale was well known to the Germans as a commercial article, and the affinities of the Torbanehill mineral seemed to lie in that direction.

Dr. Douglas Maclagan desired an explanation of the opinions expressed by Dr. Bennet in regard to the structures found in the brown, Methil, and Torbanehill coals. Dr. Bennet had stated the fact, that scattered vessels, few in number, were found in the Torbanehill mineral and in the brown Methil; he had also stated his conclusion that in the latter the structures were normal, and that they pointed out the brown Methil to be coal, while in the Torbanehill mineral they were merely accidental, and not to be regarded as affording evidence of the origin of the substance. Dr. Maclagan wished to know the process by which Dr. Bennet had arrived at this conclusion, and whether there were any facts to support it. [Dr. Bennet replied, that in the case of the brown Methil coal, the structures alluded to formed the organic basis of the coal, which was not the case in the Torbanehill mineral, where they were merely accidental.] At a subsequent period of the discussion, Dr. Maclagan again put his question.

Professor Fleming regarded the remarks of Dr. Wilson upon bituminous shale, just as one of those attempts to draw away the attention of the Society from the subject in hand, which had been observed on a former occasion. He called attention to Dr. Bennet's statement that coal could not be formed of cellular tissue, without an intermixture of vascular to a large extent, which he (Dr. Fleming) thought sufficiently answered by a fact he had detailed from his own observation at a previous meeting of the Royal Society, namely, the formation of a bed of peat, many feet in thickness, by a single cellular plant, having no vascular tissue whatever, *Trichostomum lanuginosum*. There was another part of Dr. Bennet's paper to which he would allude. Dr. Bennet had stated that although a fossil bone or tooth was found in a rock, we did not regard the rock as of animal origin; but Dr. Fleming reminded the Society that limestone rocks often occurred, the great mass of which consisted of fossil shells, and in such cases geologists did not hesitate to ascribe the origin or formation of the rock to these.

Dr. Greville corrected a misconstruction that seemed to be put upon the evidence given by him at the trial, in regard to the yellow bodies seen in the Torbanehill mineral. He was far from saying that they were actual cells in their normal condition; but in his own mind he was perfectly satisfied that the mineral had a vegetable basis. This opinion was formed after a very careful examination of numerous specimens. Seeing that there was so much difference of opinion on this subject amongst scientific men, he thought it a great comfort to those of them who had been examined on the trial, that the decision was not founded on *their* evidence.

Dr. Bennet expressed a desire to see the specimens upon which the statements of some of the speakers were founded, and stated his willingness to demonstrate, under the microscope, the various facts in regard to structure upon which his conclusions were based.

The Retrospect.

I remark in "The Retrospect" of "The Naturalist" for January last, some observations on "Plants with Unnaturally White Flowers," in which the writer states that most of the plants he found with such, were growing in situations much shaded, or after a long continuance of showery weather, and their difference in colour may very reasonably be ascribed to a defieiency of sunlight; but I have noticed in situations *near the sea* many plants with white flowers growing where they are *fully exposed* to the sun's influence, not in any way stunted in their growth. On the *Sandy* Warren here, close to the sea, the following are frequent with white blooms, though plants of the usual colours are also common in the same spot, namely, *Lycopsis vulgaris*, *Cynoglossum officinale*, *Erodium cicutarium*, *Myosotis collina*, *Carduus tenuifolius*, and *Veronica Chamædrys*, but the latter not eommon. In these instances we must ascribe the change of hue to peculiar properties in the soil, eertainly not to any want of solar light. A white variety of *Calluna vulgaris* occurs on the hills in the same situations as the plant is usually found in. *Digitalis purpurea* with white flowers grows on Greenaleigh, a hill close to the sea. *Ballota nigra* I occasionally see with white blossoms in the hedge banks.—Isabella Gifford, Minehead, Somerset, March, 1854.

The Querist.

Preserving Birds and Small Quadrupeds by means of Ether.—In answer to Mr. Mc' Intosh's inquiry in "The Naturalist" of the present month, I beg to state that I have frequently made use of ether in the preservation of *birds;* I believe I took the idea from some notes of Mr. Waterton on bird-stuffing. Taking out merely the entrails of the bird, I fill the cavity with a solution of sublimate of mercury in spirits of wine; this remains a few minutes, according to the size of the specimen, when it is drained off, and the cavity filled with a piece of wool soaked in ether, and heat applied for a moment or so: the visible effect is the immediate turning white of the eyes. I find birds thus preserved keep for years even when exposed without glass. While on the subject of preservation without removing the flesh, I may mention a curious circumstance which came under my observation:—A Tree Creeper which I had intended to stuff was shut up in a cupboard, and laid upon a glove which had been used in painting, and covered with common black paint. Leaving home, I forgot my bird for two months; on my return I expected to find it in a state of putrefaction, but on the contrary it was in perfect preservation. I kept it for a year or more, when I opened it, and found the whole body, as well as the entrails, dried up, and as hard as a board: I have no doubt it would have kept for years. I may as well add that there were bottles of ether and sublimate of mercury in the same cupboard. I never tried ether on a bird larger than the Oxeye.—R. P. Alington, Rectory, Swinhope, Lincolnshire, March, 1854.

May not the egg stated by Mr. F. W. S. Webber, to have been found in a Hedge Sparrow's nest, have been in reality the production of a Cuckoo? Among the eggs of this species almost every imaginable variety is to be found. I do not happen to possess one very closely resembling the egg of the Red-backed Shrike, but I have some quite as strongly-marked varieties.—S. Stone, March 15th., 1854.

On the 2nd. day of the present month I captured a specimen of the Small White Butterfly, (*Pontia rapæ.*) Has any reader of "The Naturalist" met with so early an occurrence of this insect? I do not remember ever having before taken it till towards the end of April or the beginning of May.—Idem.

In the February number of "The Naturalist" I am asked by Dr. Morris *the exact* locality of a specimen of *Asplenium fontanum* which was given me in December last. The specimen alluded to was gathered by the Rev. W. H. Hawker in Hampshire, who, in a note read at "The Phytologist Club" on December 27th., 1852, says, "I am advised, for obvious reasons, not to publish the *exact locality*, but will add, that it is 'not a hundred miles' from the place whence I date this." The note is dated "Ashfield Lodge, Petersfield, Hants." The *exact* locality, therefore, I am unable to give, but it was gathered not a hundred miles from Ashfield Lodge, Petersfield, Hants. Mr. Hawker's note is one of great interest, and well worthy the perusal of all the readers of "The Naturalist;" it is to be found in the "Phytologist" for January, 1853. In Mr. Moore's "Handbook of British Ferns" this locality is also mentioned.—H. C. Stuart, Christ's College, Cambridge, February 16th., 1854.

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Communications have been received, up to May 12th., from J. Dalton, Esq.; J. P. Fraser, Esq.;—S. Stone, Esq.;—E. M. Barnard, Esq.;—J. J. D.;—G. Dixon, Esq.

Contributions have been received, up to May 12th., from A Subscriber to the Naturalist;—G. Donaldson, Esq.;—Mr. J. O. Harper;—J. Fothergill, Esq.;—G. R. Twinn, Esq.;—W. Webster, Esq.;—J. Longmuir, Esq., Jun.;—T. K. Atkinson, Esq.;—O. S. Round, Esq.;—J. Rose, Esq., M. D.;—Mr. M. Westcott;—S. Hyle, Esq.;—T. F.

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THE CRAIG OF AILSA.

BRITISH MUSEUM NATURAL HISTORY.

BY GEORGE DONALDSON, ESQ.

Read before the Natural History Society of Glasgow.

It has frequently been a matter of considerable surprise to me, that so little notice has been taken of a place so admirably adapted by nature for our instruction, and which in my opinion has been completely overlooked, at all events by the Ornithologist, and my surprise is increased when I find that Macgillivray and Audubon, when visiting the Bass together, as they did in 1835, should have overlooked the Craig. In no instance can I quote the practical remarks of any interested in the science; and it is only an occasional reference which points out its existence at all as an aviary, and that too in such a remote way as would scarcely induce one to visit it, so that it is more with a view of bringing it prominently before you that I have been induced to make the present remarks, than for any information which may be obtained from me, and that it may pave the way for some of the members of this Society, at some future period, to furnish us with much detail that I must have overlooked.

Independent of its attractions as one of the greatest breeding situations in this country, it possesses many other beauties; and I have no doubt that both the Geologist and the Botanist have found much there to interest them; (and although rather deficient in both of these sciences,) I could not help gazing in astonishment from the base, at its majestic and precipitous grandeur, and this arises not so much from its height, (which is computed at only twelve hundred feet,) as from the insolated position which it occupies.* The incessant screaming and croaking of myriads of Sea-Gulls, Solan Geese, Razor-bills, and Guillemots, during the summer, is beyond description, and renders it in my opinion a scene rarely to be met with. This extraordinary confusion of tongues is a striking contrast to the silence which prevails during the winter months, for, with the exception of the hollow croak of the Raven, and the occasional scream of a storm-stead Sea-Gull, all is hushed up.

How and when the rock came here would be quite as difficult for me to account for, as the production of either Dumbarton Castle or the Bass Rock, unless we acquiesce in the popular tradition of its removal from out of the hill of Knockgirran, in the parish of Dailey, in Ayrshire, and being cast into the sea through the mystic influence of a witch called Maggie Osborne, as a stepping-stone for her from Carrick into Cantyre: as this hypothesis is *rather* doubtful, we must fall back upon geological authority, and acknowledge a primary formation with a proportion of basalt.

I am afraid you would find it a tedious narrative were I to enter into

* J. W. Naul, a smuggler, was cast ashore here about fifty years ago, with part of his wreck. He lived three months upon it, during the winter subsisting entirely upon Limpits, (*Patella vulgata*,) Dog Wilks, (*Purpura lapillus*,) and a cask of French Brandy, (requiring no interpretation,) which had been washed ashore with him.

a detailed account of its appearance, for this is not so much my object as to endeavour to point out to you the appearance and habits of some of its tenants, as *frequent* opportunities have enabled me to do so. As an outline however of its general expression may not be unacceptable, I will risk it, were it for nothing else than to point out to you the way to the Cairn; for the ascent of the rock can only be accomplished in one way with safety, and that is after landing near the small house occupied by the keeper; you take a south-western direction along the shore for upwards of a quarter of a mile, where a narrow and steep path will be observed leading up to the ruins of an old chapel, situated at an elevation of at least four hundred and fifty feet, the history of which appears to be perfectly unknown.

I am not aware that any date has hitherto been discovered to clear up the mystery; and the only remnant which may yet establish the tradition, is a shield in relief, built into the outside wall of the tower, upon which there appear to be three roses engraved. A number of silver and copper coins were discovered about twenty years ago, by some fishermen, upon the beach below the chapel: had they been preserved they might have assisted in clearing up the *historie*, but the scramble which ensued for them prevented that. The path here wends round the back of it, and immediately takes the hill amongst a luxuriant growth of vegetation, springing from a rich deposit of black moss, where the Scarlet Catchfly, and other wild flowers, are in great profusion. The Tree Mallow arrives at great perfection, and Boor Tree is abundant around part of the base. Nettles, to which I would call the attention of tourists, should be carefully avoided, as they are certainly the most wicked and poisonous that I have ever stumbled upon. This appearance of soil continues for about one hundred feet, till you reach a delicious spring close to the path; the ascent shortly afterwards becomes very rugged, and the immense accumulated masses of rock, scattered in wild confusion, continue till you reach the summit.

It is only from this point, and by descending to the front of the northern and western precipices, that the extent and appearance of the Craig can be thoroughly understood. The circumference of it is estimated at fully three miles, and at low water it is quite possible to make a circuit of it on foot, but I would never recommend any one afflicted with gout, or using crutches, to make the attempt. The western side of it presents an extraordinary appearance of dilapidation, from the gigantic masses that have fallen from time to time, and now lie piled upon each other to a height, in some places, of at least three hundred feet.

The inequalities produced on this precipitous front, constitute the only breeding-places of the Solan Goose, which, in the month of June, can be seen hatching in thousands; as it invariably selects the projecting ledges and ridges for this purpose, every other nook and crevice sufficiently large to contain a nest, (I ought to say an egg,) is sure to be occupied by either the Razor-bill, (*Alca torda,*) or the Guillemot, *(Uria troile,)* between which

the most friendly disposition appears to exist. Immediately adjoining this division, and to the north is the principal situation occupied by the Guillemot for hatching.

The character of the rock here suddenly changes, from the shattered appearance it presents amongst the Geese, to that of a more massive and solid nature, along which a series of ridges, averaging from ten to fifty feet in length, and varying in height from fifty to five hundred, and seldom exceeding six inches in breadth; on these ledges the birds are so closely packed that it would be difficult to introduce the hand betwixt them, and no idle or barren bird is countenanced by this industrious community. As the Common Guillemot is the bird to which my observations principally apply, I would remark that, with the exception of the Solan Goose, it is the earliest bird which arrives at this breeding station. They begin to appear about the 1st. of April, and if a westerly wind should prevail, they have nearly all returned by the 4th.; there are also other arrivals about this time, to which I shall probably refer on some future occasion. The Guillemot builds *no* nest, and not even one fragment of sea-weed or any other material is provided by the bird, to ensure the egg, (for you are aware they only lay one,) from rolling off the uncertain position in which it is very frequently placed; and when the birds are driven from their nests, or eggs rather, from a shot being fired amongst them, the exposee of eggs is about one of the most interesting sights to be witnessed upon the Craig, and the Naturalist looks with astonishment at the endless variety before him; for I am persuaded that from out of one thousand dozen, not two eggs could be found alike, and I question much if ever two were; this does not arise from any difference in the formation of the egg, but from the variety of markings and colouring, which you will find illustrated in the specimens before you. The Guillemot, as I remarked, lays only a single egg about the middle of May, and as the young one becomes pretty well fledged about the 15th. of July, she then carries it on her back about that time into the sea. It has been a matter of much conjecture with me how such a wonderful difference should exist in the colour of the eggs, considering that the food and habits of the birds are precisely alike; and as I have not yet been able to reconcile this, I attribute it wholly to some physiological cause, which, I have little doubt, can be explained by some of the members better skilled in the science than myself. If I recollect properly, I think the late Professor Wilson, during a tour through the western islands, remarked the variety, and thought that it might occur to enable every bird to distinguish its own egg; and from this being a very reasonable supposition, I feel inclined to support his opinion. If this bird, however, had provided itself a nest, I might think otherwise, but from the indiscriminate manner in which the eggs are placed, and that so close to each other, I consider it a very judicious arrangement for each bird to have its *own private mark.*

The egg of this bird is larger in proportion to the bird than any other I have ever seen. The eggs of all the aquatic birds found at the Craig are

quite fit for use; and indeed, with the exception of the Solan Goose, which to my taste is rather salt, are by many esteemed preferable to that of the domestic fowl; but as I have unfortunately come upon them nearly hatched, I arrived at precisely the same opinion expressed by a little girl during breakfast, who remarked, "I do like eggs, mamma, but I do'nt like eggs with beef in them."

Mr. Hewitson, the Oologist, who has so ably described, and beautifully illustrated, this branch of Natural History, gives no opinion as to how such a variety might occur. This gentleman, (I mean Mr. H.,) has been most successful, and has probably succeeded in forming the finest and most extensive collection of the Eggs of British Birds of any man in this country; and if I may be permitted to judge by the distances, difficulties, and disappointments, which I have had while endeavouring to form a small cabinet, I cannot estimate his expenditure in the pursuit, under no matter how much, and however far such a desire may go, to establish our fame as *cadgers*, I cannot allow myself to think that any banker would judge very favourably of our investment, and would naturally feel very uneasy if nothing else could be found at a man's credit than a quantity of egg shells.

I have heard it frequently stated that birds possess the means of removing their eggs from one place to another; and as I have never seen it described, I much doubted it, particularly in the case of aquatic species, and more so in those which have the feet webbed, the structure of these members rendering the birds incompetent to perform the operation; and to suppose that they could accomplish it with their bill, rendered it still more improbable; but from actual observation, and that in more instances than one, I have observed the Guillemot alight close to her egg, and by a quick and almost imperceptible elevation of the wing, snatch it up, and run along a ledge for a short distance, where I have seen her deposit it. However scrupulous I was in believing this, I am inclined to think that it is only the swimmers, and probably some of the waders, which resort to this mode of transportation.

In addition to this extraordinary act on the part of the Guillemot, I would here notice another habit equally interesting, and betraying the same affection for its offspring when in a more matured state. I allude to the fact of the parent bird carrying her young upon her back from the high ledges into the sea; birds of a tender age, and which had never been upon the wing, are frequently seen on the water in the immediate vicinity of breeding ledges, from which it would seem impossible for them to descend without assistance; and it has been conjectured by some authors, that the parent bird had conveyed them thither in the way alluded to. Although I believe no observations have been made to confirm this supposition, it would seem to have gained credit from its being the only apparent means of locomotion for these half-fledged young ones being found on the sea; and I could hardly myself have deemed it probable, but during my frequent visits to the Craig I have watched these birds for days in succession, and I am enabled to substantiate the fact from

personal observation, during the repeated stays I have from time to time made upon it; many a pleasant hour have I spent in watching them in their amusements, and within a shorter distance of them than they suspected. I have often remarked that however near they will permit you at any other time, you can never approach them, excepting under some ruse, at this merry time of day. I have felt greatly interested, in a calm summer evening, to witness several thousands of them swimming in divisions, within thirty feet of the shore, the conditions of the game appearing to be sufficiently known; for without any intimation, a number of the leading birds wheel right round, and go fluttering and spluttering down through the centre of the vast and varied community, which appeared to me the signal for diving, for in a second there was scarcely one to be seen above water; and when a number of them did appear, they seemed to look out for the reappearance of others, and no sooner did that occur, than down they went again, followed by the pursuing party. This order of things was carried out by other divisions, till the whole were scattered without any regard to caste or colour, which circumstance quite overruled the proverb of "birds of a feather flocking together," and went far, I think, to prove the existence of a republic amongst them. In the midst of their aquatic performances, I have observed a whole body of them suddenly appear from underneath, in the midst of a large flock of Kittywakes, or Sea Gulls, (*Larus Rissa,*) which were lightly and gently floating on the surface, in fact, light as the ocean foam itself, and which they put to flight without much ceremony; and if I could judge by their fantastic gestures, they seemed highly gratified in having played off this submarine trick so successfully.

I have also been much amused with the startling surprise exhibited by a Cormorant, (*Phalacracorax graculus,*) on finding a hundred heads pop up immediately under the rock on which he was perched. After viewing them for a short time, with an expression as grave as a mustard pot, he waddles off to a greater elevation, evidently considering this diversion a waste of time, for his habits are decidedly more of the alderman than the anchorite.

It never follows that those beasts of the field, or fowls of the air, with such unquenchable appetites, are as well suited for the food of man as those which feed more sparingly; and my experience from the variety of which I have partaken, enables me to judge of their quality; for in addition to upwards of eighty British species, including Hawks, Owls, and Carrion Crows, I could enumerate at least one hundred and fifty American species, commencing with the Canvass-back Duck, (*Anas Valisineria,*) which feeds upon the wild celery so abundant in the Susquehanna, and also in the swamps of the great Mississippi, and is esteemed above all others the greatest delicacy to be found on that continent; from that I have descended as low in the epicurean scale as the Turkey Buzzard, (*Vultur aura,*) which regales himself with as much gusto upon a rotten carcass, as the Ruby-throated Humming Bird does from the honey-cells of the Petunia, which proves that my knowledge of the good things of this life was inferior to that of Saint Peter, for he knew where

to draw the line in the assortment spread before him; but I made no distinction, just taking them as they came, as I did with all the Seafowl at the Craig, some of which were certainly more palatable than others; and this fishy glutton, the Cormorant, would have followed in the course, but having on one occasion taken some young ones from their nest during a hot summer day, I was so disgusted with the effluvia proceeding from them that I have never since had the courage to face one at a table.

A gentleman with whom I am intimately acquainted, informed me that about forty years since, he shot and cooked one on his own account, and so prodigious was the flavour, that he is inclined to believe he feels the taste of it *still*. I do not guarantee this, but this same gentleman, about two months ago, shot several fine specimens in the West Highlands, which he brought home along with him, and complimented as an equivalent for some Widgeon which he had promised, but as the formation of their bills could never have borne him out in this compliment he defaced the enemy, by cutting them short and flattening them, and he had little doubt, as he told me, that the aroma, during the process of either stewing or roasting, would make the old cook's hair curl. I have merely made these last observations to show that we can, with perfect safety, prepare every animal for food, with the exception, probably, of one or two species of the tropical fish, which it is well to avoid at certain seasons of the year. The variety of material sold for this purpose in the French markets of Lousiana, sufficiently bear me out in this statement.

Before laying down this paper I will enumerate what is to be found roosting upon the Craig, and by visiting it about the beginning of June, which I would recommend in preference to any other season, you will find the Solan Goose, (*Sula Bassana,*) Razor-bill, (*Alca torda,*) Guillemot, (*Uria troile,*) Puffin, (*Fratercula arctica,*) Cormorant, (*Phalacracorax graculus,*) Lesser Black Sea-Gull, (*Larus fuscus,*) Silvery Gull, (*Larus argentatus,*) Kittywake Gull, (*Larus Rissa,*) Stormy Petrel, (*Thalassidroma pelagica.*)—These constitute the swimmers.

Peregrine Falcon, (*Falco peregrinus,*) Kestrel, (*Falco tinnunculus,*) Short-eared Owl, (*Ulula Brachyotus,*) Raven, (*Corvus corax,*) Carrion Crow, (*Corvus cornix,*) Cornrail, (*Crex pratensis,*) Cuckoo, (*Cuculus canorus,*) Blackbird, (*Merula vulgaris,*) Thrush, (*Merula musica;*) the nest and eggs of which I have found there at an altitude of six hundred feet. Yellow Hammer, (*Emberiza citrinella,*) Rock Pipit, (*Anthus aquaticus,*) Robin, (*Erythaca rubecula,*) Wren, (*Troglodytes Europœus.*)—The foregoing birds are regularly in the habit of breeding there, and so was the Eagle, (*Aquila chrysaëtos,*) which occupied a cliff on the north-western precipice till within the last five years; he continues, however, to visit it occasionally, remaining about three weeks in October, and appears entirely to subsist during that period upon the entrails of Rabbits, which are plentifully strewn over the Craig, at that season, by men employed in killing them.

The other visitors and stragglers have been observed at the following seasons:—

Goldfinch, (Carduelis elegans.)—Seen only in winter.

Sky Lark, (Alauda arvensis.)—Seen only in winter.

Snowflake, (Plectrophanes nivalis.)

Wheatear, (Saxicola œnanthe.)—Seen in summer.

Wagtail, (Motacilla Yarrellii.)—Seen in summer and winter.

Wagtail, (Motacilla boarula.)—Seen in summer.

Woodcock, (Scolopax rusticola.)—Calls in passing.

Slow Worms, (Anguis fragilis,) are plentiful, and Mice not a few.

There is a cave, I ought to have mentioned, immediately underneath the precipice where the Geese hatch. In extent it appears to be from eighty to one hundred feet in length; twelve feet high, and probably fifteen feet in width, and fully one hundred feet above high water, in which there was a stone coffin discovered some years ago, with a cross cut into the rock immediately over it. The coffin I had an opportunity of seeing, and also part of its contents. I looked carefully into the expression of the occupant, but could not recognise him, and I question much if even his grandmother could. He reminded me of an old epitaph in the churchyard of Thornhill, which rhymes

"Here lies the remains of Geordie Denholm,
If ye saw him noo, ye wadna ken him."

This last remark in reference to this devout old catholic, you may consider a digression; but as I undertook to describe what I found *roosting* upon the Craig, I could not in justice have overlooked his reverence.

Mill of Boindie, Banff, April, 1854.

THE ARRIVAL, NESTLING, HABITS, AND DEPARTURE OF THE SEA-FOWL AT THE CRAIG OF AILSA.

BY GEORGE DONALDSON, ESQ.

Sula Bassana.—Arrives about the 24th. of February, lays one egg about the 1st. of May, hatches about the 14th. of June, flies on the 1st. of September; never seen to *carry* for his young, although, in many instances, he has been observed in great distress, with a Gurnard, (*Trigla cuculus*,) partly projecting from his bill, the spikes of which had got stuck in his throat, while attempting to swallow it. Dead birds have been picked up in this condition. All leave about the 1st. of November.

Uria troile.—Arrives about the 1st. of April, lays one egg about the 15th. of May, and carries the young to the sea about the 15th. of July. The description of fish which this bird appears almost invariably to feed its young upon, is small herrings, which it swallows almost entirely, with the exception of a small proportion of tail, which can always be seen from its keeping the bill so far apart. All leave about the 1st of August.

Alca torda.—Arrives about the 1st. of April, lays an egg about the 15th.

of May, and flies about the 15th. of July. This bird differs very considerably in his mode of carrying food for his young from the preceding bird. He appears to rear his young exclusively upon Sand-eels, which he carries *across* his bill; he attacks the Puffin suddenly from *underneath* in mid-air, and snatches from him the Sand-eels, which are dangling from his bill and intended for domestic purposes. The Puffin frequently drops them to prevent them getting into possession of this freebooter, but in this he is mistaken, for the Razor-bill immediately descends along with them, and picks them up at his leisure from the surface of the deep blue sea. They leave about the 1st. of August.

Fratercula arctica.—Arrives about the 7th. of April, lays one egg about the 15th. of May, flies on the 1st. of August. He appears to raise his young entirely upon Sand-eels, and the disposal of these fish in his bill is of the most systematic character; the heads are, without an exception, all *within* the bill, and the bodies hanging outside. If he has an even number, they are as sure to be equally divided between the two sides of the bill. The numbers vary from seven to eleven, and I have shot them with nine. All leave about the 31st. of August.

Larus Rissa.—Arrives about the 1st. of April, lays two or three eggs about the 26th. of May, and flies on the 15th. of August. Never seen to carry.

Larus Fuscus.—Comes and goes previous to his permanent residence, which is about the 15th. of April; lays three eggs about the 14th. of May, and flies about the 24th. of July. Departure uncertain. Never carries.

Larus argentatus.—Comes and goes previous to his permanent stay, which usually takes place about the 15th. of April; lays three eggs about the 5th. of May, and flies about the 10th. of July. Never carries. Departure uncertain.

Phalacracorax carbo.—Come and go up till the 15th. of April, when they remain; lay three eggs about the 20th. of May, and fly about the 14th. of July. Never seen to carry.

Thalassidroma pelagica.—Breeds occasionally here, and one was caught upon her nest, containing one egg, in the month of August, 1842; they have since been repeatedly seen in the vicinity of the Craig.

The Land Birds which remain, visit, and breed there, are as follow:—

Aquila chrysætos.—Was regularly in the habit of breeding there, but has not done so for many years past; he continues, however, to visit it for about three weeks in the month of October, and appears altogether to subsist during that period upon the entrails of Rabbits, which are very plentifully strewn over the Craig, at that season, by men who are employed to kill them.

Falco peregrinus.—Breeds here regularly.

Falco tinnunculus.—Breeds constantly here.

Otus " —Breeds here,—the old and young having both been seen. A fine specimen was caught in 1846.

Corvus corax.—Breeds always here. (One pair.)

Corvus cornix.—Breeds always here. (One pair.)
Scolopax rusticola.—Often seen in the winter.
Crex pratensis.—Breeds here,—eggs and young being found.
Cuculus canorus.—Often seen in the summer.
Merula vulgaris.—Always breeds here.
Merula musica.—Always breeds here.
Emberiza citrinella.—Breeds here, but never seen during the winter.
Plectrophanes nivalis.—Seen in winter.
Alauda arvensis.—Only seen in winter.
Anthus aquaticus.—Breeds here.
Saxicola œnanthe.—Seen in summer.
Motacilla Yarrellii.—Seen in summer and winter.
Motacilla boarula.—Seen in summer.
Erythaca rubecula.—Breeds here.
Troglodytes Europœus.—Breeds and *sings* here.
Carduelis elegans.—Seen only in winter.

The prevalence of an easterly wind occasionally prevents the Birds from arriving at the dates specified, but they may be taken as a fair average.

Mill of Boindee, Banff, April, 1854.

A LIST OF THE RAYED ECHINODERMATA OF BANFFSHIRE.

BY MR. THOMAS EDWARD.

In offering the following list of the Star-Fishes of the Banffshire coast to the readers of "The Naturalist," the writer would beg leave to say that it is not to show his acquirements as an observer of Nature, or his talents as a collector of natural objects, that he has done so; but rather to give, as far as in him lies, all publicity to those animals which are, as far as he knows, to be found in his neighbourhood, and places adjoining.

If this were done generally throughout the country, we might then, ere long, be able to form something like an adequate notion of what we really do possess; but until such be the case, we cannot even expect to arrive at anything like a perfect idea of what animals there are, or where such are to be found. Let naturalists, then, and observers of these things look to and note this, that all who can may reap the benefit.

It will be seen that the term 'Common,' applied to several of the species about to be referred to, is not used here. The reason for this is, that it appears to the writer to be a term quite misapplied, and tending to lead, especially the young and inquiring naturalist, astray rather than otherwise, as it is given to species which are in some places rather scarce, if found at all; whilst others, not so denominated, are very numerous and plentiful.

Although certain species may be quite 'common,' and perhaps abundant

in some quarters, it does not follow that such is the case in every place. The writer's opinion is that, to say the least of it, the term has, as it were, too wide or vague a meaning, whether in a general or a more limited sense, and ought, therefore, to be disused. This will be better shewn from the species about to be enumerated; but doctors differ, and so do naturalists, so that the writer may be wrong. There is one great consolation, however, that if he is, he is not the first that has been so, and in all probability will not be the last. Now for the list, in the wish and hope that the reader will excuse the many imperfections which it may contain.

(*Greater?*) *Sand Star,* (Ophiura texturata.)—This is, although termed 'common,' not what can with truth be called a very plentiful species with us, neither can it altogether be said to be scarce, but just, as it were, betwixt the two. Some splendid specimens are at times brought on shore by our fishermen.

Lesser Sand Star, (Ophiura albida.)—With us, as far as I am aware, somewhat rare, although not so in some parts of the Firth.

Gray Brittle Star, (Ophiocoma neglecta.)—This very little species is what I would term of pretty frequent occurrence here in pools amongst the lower lying rocks, especially where there is a sprinkling of sand. I have taken as many as twenty during one ebb.

Rosy Brittle Star, (Ophiocoma rosula.)—So far as my experience and observation go in these matters, I cannot, in conscience, call this species 'common,' that is with us, although it bears that general term in works which treat on this subject. That they do occur, I, of course, do not, nor can deny; but not in such numbers as one would most necessarily believe from the mere designation applied to the species.

Sand Brittle Star, (Ophiocoma minuta.)—Is there in reality such an *Ophiocoma* as this? if so, I have found it here on several occasions, and generally in company with, or near to, *Ophiocoma neglecta;* or is it rather the young of *rosula?* This little species, if it is a distinct one, is, of all the Brittle Stars which I have as yet met with, by far the most brittle.

Granulated Brittle Star, (Ophiocoma granulata.)—Now, although this species is not denominated 'common,' it is the commonest of all the Brittle Stars with us. I know that for one of the so-named 'common' species, (*Ophiocoma rosula,*) which I met with, I find fifty of these. I remember my young friend, Maggy, and three of her sisters, once bringing me a large cargo of these Stars—nearly two hundred, which they had picked up where the fishermen clean their lines, and there was not a single specimen of *Ophiocoma rosula* amongst them; and could these have been got, they would have been brought likewise. I remember also being particularly struck with the numerous and brilliant colours displayed by this same cargo, exhibiting, as they did, all those tints, and perhaps more than is possible to name, being from the brightest scarlet down to the deepest black, and scarcely two being alike. Their disks, too, were remarkably varied; some were of a perfect oval,

whilst others were pentangular; some were flat, whilst others were in a measure pyramidal, and what in truth may be termed triangular in form, and that too in its truest sense.

Daisy Brittle Star, (Ophiocoma bellis.)—This pretty Star is also found here, and I must say, that if there is but one species they are about as variable, if not more so, than that last named. I have specimens in my collection which, if I were to write a history of such creatures, I would most certainly hesitate to include under the term *Ophiocoma bellis.* They might well, from their size, being considerably larger than that generally found, be designated the "Greater Daisy Brittle Star." They are the most beautiful of this beautiful tribe which I have as yet seen, and well worthy of a more extended notice than I can give here. A full description in a list of this kind cannot of course be given; a few words, however, may perhaps be allowed.—They are larger, as I have already said, than those usually found. Their disks, too, differ considerably from those commonly met with, being of a pyramidal, or a conical form, somewhat resembling that well-known shell, *Trochus tumidus.* In colour they are like the finest variegated mahogany after it is polished, although they have not the gloss, and their disks exhibit the most beautiful carved work imaginable. The rays are short, that is in proportion to the size of the disk, strong, and closely beset with short thick hard spines. I may add that the specimens here alluded to, two in number, were procured from that heterogeneous repository of marine objects, a cod's stomach, which was taken about thirteen miles at sea. They are in very good condition.

Ball's Brittle Star, (Ophiocoma Ballii.)—This pretty variegated little species is rather plentiful here. I find them frequently amongst the refuse of the fishermen's lines, attached to dead shells, zoophytes, etc. I am not altogether very much surprised when I meet with a Star-Fish minus a leg or two, or even when three or four are wanting; but I think it somewhat strange, and not a little curious, when I find them with one more than those designed them by Nature. I am sure it is not a very common thing for *Ophiocoma Ballii* to have *six legs;* yet that such is sometimes the case will be presently shewn, except you form a new species under the term *Ophiocoma hexacrura,* or Six-legged Brittle Star, but I do not think that that can be done in the present instance; but I may be wrong; however, I will hold as I am in the meantime, but ever ready and willing to be put to rights if I am in error. One evening, not long ago, and just as I had begun to discuss the last meal for the day, my little friend Maggy accosted me rather joyfully with, "Father, I've got a new Star-Fish t' ye. Ane wi, sax legs!" "I hope so, Maggy," I replied, and at the same time added, "I doubt it some, Maggy." "Weel look at it then," she continued, at the same time holding her prize up to my face, and making it and my proboscis almost meet. "Wait a little," I again said, "until I swallow my wee bit supper, and I will examine it head over heels." Now, he who has even had the pleasure of eating a poor man's

evening meal, well knows that it does not take long to do that, especially with such a character as the writer, and bearing in mind, too, that what was termed a new species—*a new animal*—was to be looked at. "Now Maggy," I said, the last bit nearly choking me, "let's see this prodigy of yours. Just as I thought, Maggy, it's not a new species;—it's only an *Ophiocoma Ballii*, but rather a peculiar one in its having, as you said, 'sax legs' instead of five.' I have now two with six rays, having procured another a few days ago.

Goodsir's Brittle Star, (Ophiocoma Goodsiri.)—Although I have given this species a place here, still I am not altogether sure if we can boast of it or not, but I think we can, though not in any great numbers. I have four specimens, which differ considerably in many essential points from *Ophiocoma Ballii*, and which do not agree with any other that I know, except *Ophiocoma Goodsiri*. I may be in error, however, but would be most happy, if I am so, to be corrected.

Long-armed Brittle Star, (Ophiocoma brachiata.)—These are pretty often got here from haddock's stomachs, but it requires some very nice fingering, and a somewhat cunning hand to get a whole specimen in this way; their long and slender rays being so interwoven with each other, as almost to defy extraction. It is a great pity that the Moray Firth was never dredged by naturalists, as I am led to believe it never was, that is, on a scale worthy of its waters. If such were done, and done as it should be, I am quite sure, from what I know, that many a valuable rarity, and I have no doubt new species, would be procured, and better got than those already known. If I were but possessed of half the means that some are, it should not long be so; wind and weather permitting, I should have it dredged from the one end to the other, over and over again. Alas! that Nature, that fair and comely damsel, which I supremely admire, and love so well, should have called me into existence at the very moment when *Want* and *Starvation* stood hand in hand, ready to stamp the unconscious and little heir of immortality with their accursed brands. Money, it is said, is the root of all evil; but tell me, ye who know, what the want of it is? But to return.

Thread-rayed Brittle Star, (Ophiocoma filiformis.)—This is another doubtful species here, at least so far as I and my list are concerned; but if the dredge were used, it might not long be thus. I remember once taking from the stomach of a large Turbot, (*Rhombus maximus*,) which was caught at a place called the 'bank,' or out sea-fishing, the remains of an *Ophiocoma*, which I considered to be that of *filiformis;* but being in fragments I could not make much of it. It differed considerably, however, both in the disk and rays from that of *brachiata*, especially in the slenderness of its arms. I have never met with another, but am keeping an eye in that direction.

Sun Star, (Solaster papposa.)—Frequent. I have seen this species from a bright red to a pale bay, and from having nine rays to upwards of seventeen, and from a size which would have covered the crown of the broadest hat now in use, down to that of a very small lozenge.

Purple Sun Star, (Solaster endeca.)—Often met with. These, too, are frequently of numerous and different shades of colouring, such as pink, red, brown, gray, yellow, and, as its name denotes, purple.

(*Shore?*) *Crossfish,* (Uraster rubens.)—Of all our Crossfishes this is the most frequently met with among our rocks in shore, and sometimes in great numbers. It is also, perhaps, of all its kindred the most variable in form, in regard to the number of its rays. I have seen a large disk with only one arm, and a very long one too. It is not uncommon to find them here with two, three, or four rays, and with both long and short legs on the same disk. One in my collection has two very long arms, whilst other three are just seen, as it were, to be emerging from the disk; another, with two long and two short rays, when set up on the shorter rays, gives the appearance of a miniature sofa in profile.

Violet Crossfish, (Uraster violacea.)—This species, about as numerous and as variable as the last, takes to and abides in deeper water, at least with us, and are on that account a great pest and nuisance to our fishermen, by becoming attached in vast numbers to their hooks and lines, and no doubt often depriving them of more enviable game.

Butthorn, (Asterias aurantiaca.)—Not rare, nor yet abundant.

Lingthorn, (Luidia fragilissima.)—Similar to the last in numbers. I do not think that it is possible to get a full-grown specimen of this species *complete,* at least I have never seen it yet. One, in my collection, with seven rays, has one more than a foot long, whilst the others range from eight inches down to one and a half. A friend of mine tells me that he once saw an individual of this species brought on shore, which had only the bare rudiment of a single ray protruding from a large disk, yet this creature was alive, and moved about when put into a basin containing sea-water.

Bird's-foot Sun Star, (Palmipes membranaceus.)—Rare. A splendid specimen was lately procured at Me' Duff, by my friend, the Rev. Mr. Gregor, Teacher, and is now in his collection. It is large, and of a most beautiful pinkish red.

Knotty Cushion Star, (Goniaster equestris.)—Occasionally met with, but not so rare as the last.

Rosy Cribella, (Cribella rosea.)—More frequently met with than either of the two last named, but by no means numerous.

Eyed Cribella, (Cribella oculata.)—Well now here is another very doubtful gentleman, eye him as you will, either with one, two, or even five lenses. Here I would again ask, Is there in reality such an animal? or is it merely one of fancy or of mistake? For my own part I am rather inclined to believe that it is either of the two, or perhaps a compound of both; but if not, and if there is actually such a creature, then I think I have found it here on two or three occasions, at least I have met with *Cribellas* which differed considerably from *rosea,* and which had something of the appearance of what some

might term eyes; but I must confess I did not see them sparkling finely, neither can I say that they were of a very "lovely blue."

It will be seen from the foregoing list that, even if we take away the doubtful ones, we can, after all, boast of sixteen distinct species—no mean number, everything considered; and I have no doubt that future observation will add more, and tend to clear up the mist that hangs over others alluded to here.

Banff, February 26th., 1854.

NOTES ON BRITISH SWALLOWS.

BY A SEA-SIDE NATURALIST.

We well remember the deep interest we took in these birds as we watched them flying along shore at the time of their arrival in spring. Our Journal, from the second week of April to the 1st. of May, furnishes proofs of the frequency of our observations respecting them; and a common source of wonder appears to have been the immense number that swept past,—all in one direction —northwards. We conjectured they had coasted along the shores of England, and were proceeding to people our northern towns, villages, and country-places, where we were sure the glad presence of the Swallow had not been hailed. And this may be illustrated by the following scene we witnessed:—

Up to the 20th. of April, 1848, not a Swallow had been seen in the town or neighbourhood of Dunbar; and in the morning of that day, just about sunrise, when rambling by the sea-side about a mile distant from the town, we observed, by the aid of a glass, an immense concourse of small birds out at sea, a long way off to the south-east, but speedily approaching; they were distinctly seen glancing in the light streaks on the water, and in their flight inclining towards the shore. When nearer us, we knew them to be the Common Martlet or Window Swallow, (*Hirundo urbica*,) and the main body of the flock flew steadily past, giving off detachments, now and then, which steered landwards, and broke up into smaller companies. A second and a third troop of them appeared, and, like the first, flew steadily onwards, without diverging in the main from their flight northwards; and in our return we found the town street alive with them flying to and fro. In front of one unoccupied house, were at least thirty or forty, chirping and chattering around the window corners bearing the remains of old nests; and on different chimney tops we observed others busied in arranging their plumage after their journey. But this manner of appearing is not usual; generally speaking, a few scattered pairs are the heralds, and even these may be seen for some days before others arrive. We may remark, however, that every season we have noticed these migrations—flocks passing, and straggling parties leaving them in the manner described.

The Chimney Swallow, (*H. rustica*,) and the Sand Martin, (*H. riparia*,)

arrive about the same time, generally a few days earlier, but in smaller numbers; the latter, indeed, mostly in pairs, though sometimes we have counted ten in a troop. The former is our favourite amongst Swallows, and however much tastes may differ, we think it the most elegant. Perhaps our partiality may arise from the close attention we gave to its habits, and from our having kept tame individuals, for a time, in confinement. The nest is found in almost every situation, for though its common name would lead us to suppose it frequented chimneys, such a habit is not characteristic of the bird; yet it is the only species which, so far as we know, inhabits chimneys. In a few instances we have seen a pair issuing from a red chimney-can, where their nest must have been built, but it is proper to mention that the chimneys were not in use. They do not, however, always choose a safe place, for they will sometimes mistake a sootless aperture for one in disuse, and involve themselves in all the horrors of a smoky house. The most curious case that we can quote occurred within our own observation, and was repeated annually for a period of four or five years. Three pairs of Swallows, (*H. rustica*,) built their nests in the interior of the smoke-funnel of a kiln for drying oats, and had, when we first discovered them, each a brood of young ones. The kiln had been once used when these birds were sitting on eggs, without causing them to forsake their nests; but one morning on going out of doors, there was a sad spectacle awaiting us. The miller was at his work, drying oats, and the parent Swallows were fluttering and screaming in great distress. The smoke and heat did not deter them from venturing inside, and we could not at first divine their object in exposing their lives to jeopardy. It was soon explained, however, the young were nearly fledged, and by and by made their exit, but in what manner we could not discover, as we had for a short time left the spot. Towards evening, when the fire was put out, and the tenants of the funnel quiet, we dispatched a boy to the roof of the building, and he reported that there were three nests, all containing young.

The Chimney Swallow occasionally remains with us much later than its congeners. In 1847, we saw several specimens on the 24th. of November, and a solitary individual on December 15th., flying close to the sand, on the lee-side of the high wall by the sea-shore. It was observed again on the following day, hawking over the same spot, but was apparently languid in its flight. The weather at that time was mild, but had been cold and boisterous for some days towards the end of the previous month.

We are disposed to look upon the Bank Swallow, (*H. riparia*,) as a solitary bird; for, although in some cases, where an extensive abrupt cliff may afford room for a great number, and find tenants too, yet the species is more frequently, we think, found breeding in a colony of, at most, four or five pairs. During our own direct observations we concluded that a solitary couple was oftenest seen, but we should hardly venture to publish that opinion against so much contrary testimony. In the county of East Lothian we have never seen a spot where more than thirty or forty were established together,

while on the other hand we could lead doubtful ornithologists to the burrows of almost a hundred single birds. The Sand Martin is easily tamed when young, and will greedily take flies and other insects when offered to it. We had two or three at various times, which were great favorites, having become quite familiar, and accustomed to use their wings in a room in search of prey.

One interesting fact in connection with the Martlet or Window Swallow, (*H. urbica,*) is its habit of associating sometimes in large communities in rocky cliffs near the sea: these colonies far surpass, in extent, those of the Bank Martin. At the Cove shore, in Berwickshire, there were last summer from fifty to a hundred families lodged in the face of a high cliff at the time of our visit. We slung a few stones at the most thickly populated quarter, and alarmed the whole of the feathered tenantry, which issued wildly from their resting-places forming a perfect cloud of birds, and screaming incessantly till we retired. Few of the nests were affixed to the smooth parts of the rock; the greater proportion were lodged in the crevices and inequalities, some of them adhering to each other.

The Swift, (*Cypselus apus.*)

Opportunities have been within our reach for watching the proceedings of this bird while nesting. In one case a pair had taken possession of a hole under the eaves of a slated roof, which a couple of Sparrows had been accustomed to call their own for many seasons. There was a continued warfare for the mastery; and we have often been amused at the impertinence of the male Sparrow, in doggedly maintaining his ground when the Swift attempted to get in. An unusual clamour attracted our notice one evening, as the Swift had forced a passage, and turned out his opponent, who called to his aid an indignant multitude of neighbour Sparrows to resent the affront. One or two of the boldest entered the hole while their fellows kept up an encouraging chatter outside. There was no doubt war in the interior, so we procured a ladder, being anxious to hear the altercation; and, having reached the top spar, we put our ear to the mouth of the crevice. It was more capacious than we had imagined, for we could hear nothing for a while but smothered chirping; then the Swift made some wrathful exclamation—'Hree-ee-ee, hree, hree,' which broke out at intervals, prompted in all likelihood by the impudent perseverance of the "Sprauchs;" till at length one grand scream dissolved the interview, and the Swift rushed out. For our eavesdropping we got what a rude spectator called a 'whang on the lug,' which however, caused us more alarm than pain; and we descended with the intention in future to let "Develings" and "Sprauchs" settle their own quarrels; we therefore looked up to them ever afterwards, and waited for the result. Neither party were like to give in, for both pairs of birds regularly supplied materials for the nest. It was curious to notice this; the Sparrows brought paper, strings, wool, and cotton, and the usual articles employed by the species in building; while the Swifts, with equal diligence, gathered feathers and floating straws, which we distinctly saw them seize when on the wing and carry to the hole.

It turned out, however, a fatal mixture; one of the Swifts was seen in the gloaming soaring aloft, displaying a floating pendent in one of the Sparrows' hempen lines, and next morning found tethered to the branches of a pear-tree growing nearly in contact with the wall, quite dead.

This bird sometimes leaves its young to perish in the nest, should it unfortunately have a late brood, not fledged in time to migrate with the others, when they leave in September. We once witnessed a distressing case where the abandoned family suffered a slow death by starvation. It was really painful to see the little creatures after their parents had gone, protruding their round sooty faces, and plaintively *cheeping* for food. Their cradle served them as a tomb; and next year, the old birds finding the skeletons difficult to remove, built another nest on their remains.

In addition to the species whose habits we have in part attempted to describe, we have to record the supposed appearance, in our locality, of the Alpine Swift, (*C. Alpinus;*) but we are sorry that what we have to relate of it is of a very unsatisfactory nature. From our Journal it appears to have been on the 22nd. of May, 1847, when this bird "met our astonished gaze." Our attention was riveted in a moment to it, as it hawked for prey above a range of stables early in the morning of that day; and from that hour we resolved, if possible, to get hold of it. For three successive days and evenings, we saw it occasionally in the same neighbourhood, flying in company with other Swifts, and having got ready a charge of small shot, we took as determined a stand against it as any misguided or cruel collector of British rarities ever did. Many an upward look did we indulge in, waiting a chance to bring it down; now it would poise at an altitude of eighty yards, or thereby, and again dash off at lightning speed, while its white breast glanced in the light —the very phenomenon that gave eagerness to our designs on its person; then it would return again and hang on almost motionless wing above us at the same respectful distance, until some shrill scream from one of its darker companions gave the signal for a change. But, shy though it was, its doom was fixed; we shot it as it glanced athwart a chimney top—a most unfortunate moment. Now, cried we, for the decision; but alas! it was swallowed in the jaws of the gaping funnel, and was seen no more. It had actually fallen down the wide-mouthed chimney of an unoccupied house, whence it was impossible to recover it. We could in our turn do nothing but give vent to our regret that our winged prey had in this way cheated our hopes. There were besides, the unpleasant doubts about its species, connected with its sudden and unlooked-for disappearance, which heightened the loss. Colour alone induced the question, *Alpinus* or *Apus?* and in our mortified enthusiasm we could only answer—"Too black, and yet too white."

"Like spirits of a middle sort,
Who dropt just half-way down, nor lower fell."

DRYDEN.

April 1*st.*, 1854.

INJURIOUS INSECTS.—THE EARWIG, (*FORFICULA AURICULARIA.*)—No. 1.

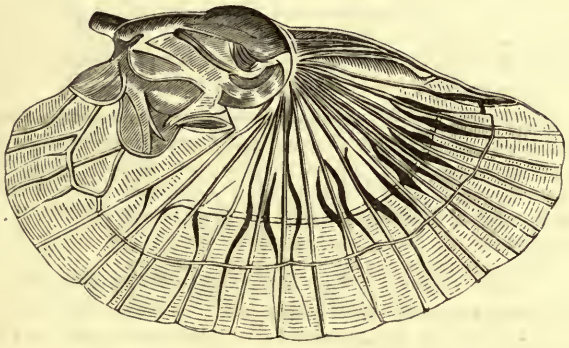
BY J. MC' INTOSH, ESQ.

THE genus *Forficula*, (Vulgo Earwig,) belong to the order *Orthoptera*. Our present subject is too well known to require any minute description, and is too generally an object of unconquerable dislike, from the absurd idea of its insinuating itself into persons' ears. Of this idea the populace of most countries are alike persuaded, and it is astonishing to find even the great legislator of Natural History perpetuating the same error. In consequence of this notion a general proscription is extended against this race of insects throughout the whole civilized world, though I believe unsupported by a single fact. They are, however, wholesale destroyers of peaches, apricots, plums, and other fruits, with a catalogue of flowers too numerous to mention; and if they congregated like ants they would destroy everything of this sort. They make their way to the foot-stalk of the fruit, get to the stone, etc., and live there day and night; and when you open a fine and delicious fruit, with the full intention of having a nice mouthful, you find to your horror and disappointment that it is already in possession of two or three Earwigs, and by them half consumed. So it is with the petals of some choice flower on which our fondest hopes have been set. The rapidity with which they devour the petals of flowers is remarkable; they clasp the edge of the petal in their fore-legs, and then, stretching out the head as far as possible, bite out a mouthful, and so on, till the head is brought to the fore-legs, just the same as leaf-feeding caterpillars do. When the breeding-time has arrived, the female retires to some sheltered place, as the cracks in the bark of old trees, walls, etc. Here she lays her eggs, to the number of twenty-five or thirty. When she has done laying, she sits upon them in the same manner that a hen sits upon her eggs, till they are hatched, and with as much care and fondness. If the eggs or the young after they are hatched are disturbed, she will immediately collect them together till they are old enough to find food for themselves. How the young at this stage are fed, or with what sort of food, I am not able to state, nor have I met with any writer who is; therefore any information on this point will be greatly esteemed.

Although vegetable substances form the principal diet of the adult Earwigs, De Geer asserts that they are not only carnivorous, but cannibals. We have tried several experiments to ascertain the truth of this remark, and we have always found them devour vegetable food when it could be procured, but when this was withheld they would devour flies, and even one another. It may therefore be inferred that Earwigs in some degree make up for their ravages on vegetable life by destroying other insects, though their nocturnal habits render it somewhat difficult to ascertain the truth of this.

A remarkable fact in relation to this insect is its great abundance in par-

ticular times and places, and its subsequent rarity: for the last four years we have not met with four dozen specimens. They are also well known to migrate in large flocks, selecting the evening for their excursions. It is an exceedingly timid insect, and if the head is buried, so as to exclude the sight of danger, the other portion of its body may take its chance of detection. In this position they may frequently be found amongst the petals of flowers which they frequent. The best trap for them is cabbage leaves baked, or held before the fire till quite soft; then rub them over with butter or dripping, and lay them on the ground by the side of walls or flowers. Bowls of tobacco-pipes, bean-stalks, small pots filled with moss, or bits of paper made like extinguishers on the top of stakes, to which the plants are tied, are common and excellent traps for these vermin. They find these extinguishers delightful retreats from the angry eye of man, and the burning rays of the sun. These traps should be examined every morning, and the Earwigs destroyed. Where poultry is kept, we should recommend their being fed with the captured insects, on which they will soon show signs of improvement.



The wings of this insect are of a curious and elegant texture and wonderful structure. The upper part is crustaceous and opaque, while the other part is beautifully transparent. They fold up into a very small compass, and lie neatly concealed under the elytra, which are not more than a sixth part of the wing in size. They shut the ribs like a fan; the strong muscles used for this purpose are seen at the upper part of the figure, (which is considerably magnified.) The ribs are extended from the centre to the outer edge; others are extended only from the edge about half way, but they are all united by a band at a small but equal distance from the edge; the whole evidently contrived to strengthen the wing, and facilitate the various motions thereof, and executed with a neatness and elegance surpassing my poor power of description.

5, *Middle Street, Taunton, February* 13*th*., 1854.

Miscellaneous Notices.

Do Hawks drink?—Having seen an article in your interesting journal, vol. iii., page 135, regarding the fact of Hawks requiring drink, I beg to offer you the following remarks on the subject, presuming that they may be interesting:—I caught a young Kestrel in my garden in September, 1853, which had escaped from some cottage children who had clipped his wings. The bird is still alive, and doing well, is as playful as a Kitten, but cannot, of course, fly as yet, as his wings have not grown. Since I have had him he has, on an average, completely got into a large pan of water once a week, and remained in it sometimes as long as ten minutes, thoroughly soaking every portion of his body by settling down and throwing the water over his back with his wings; this he did even when the water had a coat of ice on it, during the severe weather in January, but then only on a fine, clear, sunny day. I have frequently seen him drink, as your correspondent says, exactly as a Common Fowl would drink. I supply him regularly with raw beef, and as many small birds or mice as I can get. A few weeks ago I obtained a female Merlin which had its wing broken by a shot; I noticed it drink out of the pan in the same manner. At the expiration of a week I was obliged to kill it, as it appeared to pine with its broken limb. I gave the body to a friend, who has sent it, I believe, to the Dover Museum, it being rather rare in this county.—A. H., Tenterden, February 27th., 1854.

The Wryneck, (Yunx Torquilla.)—This morning I early discovered the Wryneck in our orchard, March 18th., 1854. On referring to my calendar I find that last year I heard its cry on March 1st.; I saw it on the 5th. White records March 5th. as the earliest period of his observing it; and I think the date of last year worth registering, as we were suffering from very severe cold and snows then; but with the present season, which is *much* milder, it is a *much* later visitor.—G. R. Twinn, Bawburgh Hill, Norwich, March 18th., 1854.

Early Nesting of the Wood Pigeon, (Columba Palumbus.)—On Monday, March 20th., as I was walking through a thick plantation of spruce firs, I was surprised to hear a Wood Pigeon fly off a tree in the same manner as they do when they are nesting. On going up to the tree I found a nest with one fresh-laid egg in it. This is surely very early. A little farther on, in the same wood, I found a Squirrels' nest with two young ones in it.—J. J. D., West Grange, Perthshire, March, 1854.

On Leucophasia Sinapis and Vanessa Hampstediensis.

Mr. Dale wrote to me some time since, asserting—

1st.—That in my "History of British Butterflies," I had, under the head of *Leucophasia Sinapis*, figured two species, the other being *Leucophasia Lathyri*.

2nd.—That I ought not to have included *Vanessa Hampstediensis* as a British insect.

I demurred to either of my good old friend's inconclusive dicta, and think it necessary to put forth my reasons for being "of the same opinion still" that I have been all along, inasmuch as I gathered from his letters that he had been conveying to other persons an idea that I had been mistaken in the above particulars; and also that he did not seem inclined to own his error to those whom he had thus misled, nor to re-imbue them with the truth. I will therefore, 'pro bono publico,' recapitulate the facts I pointed out to him, First, as to the supposititious *Leucophasia Lathyri;* and, Secondly, as to the *Vanessa Hampstediensis:*—

As to the former, he asserted that my left-hand figure, (as you look towards the plate,) represented *Leucophasia Lathyri*, and that that species was to be distinguished from *Leucophasia Sinapis*, in three particulars, namely, in its, (*Lathyri*) having, Firstly, the wings narrower; Secondly, its shape on the outside hollowed instead of rounded; and, Thirdly, the under side different, (this last particular being afterwards qualified into its being distinguishable by a "practised eye.")

To this I pointed out, beginning with the last-named particular,—

1st.—That my cabinet containing ten specimens of *Leucophasia Sinapis*, from two of which the figures in the plate were taken, in none of them was there any appreciable difference from the others in the under side.—This was not enough to convince him!

2ndly.—That hardly any two of my specimens agreed in the shape of the wings, all the others being *intermediate*, more or less, between the rounded one, which he allowed to be *Sinapis*,

and the hollowed one, which he called *Lathyri*. I sent him the shapes of each.—This was not enough to convince him!

3rdly.—That they in like manner varied in width, some being here again *intermediate* between the broad one he allowed to be *Sinapis*, and the narrow one he called *Lathgri*.—This was not enough to convince him!

Yet, observe, on these three supposed distinctions, he grounded his assertion. Neither of the two latter, it will be perceived, is, as shewn above, any ground whatever, in the present species, of specific distinction, and the former is applicable to none of my specimens or figures.

I should here add that Mr. Dale admitted that he had himself formerly figured two specimens of *P. Dispar*, to prove that the width of the wings might vary.

2ndly., as to the *Vanessa Hampstediensis*.—Let it be observed how guarded I was in what I said of it in my account.—"The only specimen of this insect that has ever yet been recorded, was captured at Hampstead, near London, by Albin, and then first described and figured by Petiver. It has since been continuously figured and described by succeeding Entomologists, who have faithfully copied the original picture. By some it has been considered a foreign specimen, accidentally imported; by others as the product of two different species. The specimen is however no longer in existence, and cannot speak for itself; no 'Ecce signum' can now testify to the truthfulness of the Entomologist who shall pretend more accurately to describe it, than in the stereotyped form which has come down to the present day."

Mr. Dale said that I ought not to admit it at all, because it must have been a mistake of Petiver to say that Albin took it at Hampstead, and that he must have *meant* the "Isle of Amsterdam."

To this I replied, and reply,—

1st.—That Petiver's express words are, (I quote from my copy of Haworth,) "*Papilio oculatus Hampstediensis ex aureo fuscus*, (Albin's Hampstead Eye,) *where it was caught* by this curious person, and is the only one I have yet seen."

2ndly.—That if he had meant the "Isle of Amsterdam," he would have said so.

3rdly.—That *Amstelodamum* being the Latin for Amsterdam, the word in this case would have been *Amstelodamensis*, and not *Hampstediensis*.

4thly.—That *Hampstediensis* means "of Hampstead."

5thly.—That the Isle of Amsterdam is described as a barren rock in the Indian Ocean, on which it was remarkable that not a single insect was to be found except the Common Fly!

He then said that there were three Isles of Amsterdam; but he could neither tell me in which of the three the Butterfly was taken, nor when, nor by whom.

6thly.—That every Entomologist of eminence, down to Stephens and Curtis, has given it as British.

"The very height and front" of my "gravamina et reformanda" "hath this offence no more."

I think, therefore, that I have sufficiently proved myself right in both points—Q E D.

Not to trust too much, however, to my own judgment, I have (which was indeed Mr. Dale's own proposition,) consulted Mr. Allis on the subject of the *Leucophasia*, and the following is his report, after seeing all my ten specimens, and comparing them with the two figures in the "Butterflies:"—

1st.—That all the specimens are British.

2nd.—That they are all *Sinapis*.

If I remember right, Mr. Dale expressly disavowed attaching any importance to the colour of the tips being more or less dark. In fact, throughout his letters, he laid no stress whatever on that feature, but confined himself exclusively to the three points above mentioned. In a later letter, too, he says, "*Sinapis* varies also, as well as *Lathyri*, in having more or less black on the *tip;* but the *chief* difference is in the outline, and on the reverse side of 2d. wings." Again, "There is a *rotundity* at the apex, which forms a *specific* distinction in *Sinapis*."

Now I have shewn that several of my specimens, pronounced by Mr. Allis to be British, and *Sinapis*, as they most unquestionably are, have the outside of the wings *hollowed* instead of rounded, the distinction being really that, as remarked by Mr. Allis, between the male and the female! not a "specific" distinction at all!

I have only to add that I two or three times compared, before Mr. Allis, the specimen with the figure, and he not only did not observe on any apparent difference between them, but pronounced that they agree as closely as a figure can be expected to do with a specimen. In a letter since received from him, he says, "Whatever stress Mr. Dale may lay on colour, I consider

that it is of more importance in a figure of *Sinapis* than perhaps in any other species of our Diurnal Lepidoptera, because the intensity of colour is the most *palpable* characteristic of at least one nearly allied species."

I need add no more, but when we find such "doctors disagree," it may teach us all that humility which is the true spirit of science.

I can shew the specimens to any entomologist. F. O. MORRIS.

Reviews.

Class Book of Botany: being an introduction to the study of the Vegetable Kingdom. By J. H. Balfour, M. D., F. R. S. E., etc. With upwards of Eighteen Hundred Illustrations. Part II.—Physiological Botany. Edinburgh: Adam and Charles Black. 1854. p. p. 755.

In a short notice of the First Part of this work, at page 158 of vol. ii. of "The Naturalist," we expressed our decided opinion that we had a book of great and intrinsic value before us: any one taking up the present work, which is the second and concluding part, cannot avoid feeling that Dr. Balfour's high character as a Botanist is amply and fully sustained. The volume is indeed rich in varied and most useful information, and we trust that any of our readers requiring a Class Book will procure it. There are indeed few to whom its pages would not prove instructive; while to the student it will be an invaluable assistant. Even the agriculturist may learn much from this volume; for he will find the principles on which many of his every-day works are dependent fully explained; and the nature and properties of the plants among which he lives elucidated. We cannot pretend to give any outline of the subjects embraced in this volume, but shall take one or two short extracts at random. At page 623, speaking of the "Vitality of seeds and modes of preservation," he says,—

"Some seeds must be sown immediately after they are ripe, otherwise they lose their vitality, and decay. This is the case with the seeds of Magnolia, Coffee, Clove, and with those of an oily and mucilaginous nature. Even though the germinating power is lost, the seeds may be in a state fit for food. The seeds of the double Coco-nut, (*Lodoicea Seychellarum,*) when carried from the Seychelles Islands to the Maldives, and those of Entada (*Pursætha*) sandens, when borne by the gulf-stream from the Antilles to the outer Hebrides, are to all appearance fresh, although they will not sprout when planted. Wheat which had been placed in wooden casks, well pitched and secured against the influence of the weather, in 1548, made excellent bread at Zurich in 1799, although it did not germinate. Seeds with very delicate integuments can seldom be kept longer than a few weeks or months, while hard and bony seeds have been known to germinate after the lapse of many years. Certain seeds are known to retain their germinative powers for a long time. The seeds of Cucumber have germinated after seventeen years, those of Colsa and Malva crispa after eighteen, of Althæa rosea after twenty-three, Maize after thirty, Haricots, or French Beans, after thirty-three, Melons after forty-one. For sixty years a bag of seeds supplied the Jardin des Plantes annually with Sensitive plants. Haricots taken from the Herbarium of Tournefort, and which were at least one hundred years old, were found to germinate, as were also seeds of Hieracium, fifty years old, from Fries' Herbarium. Grains of Rye have been found fertile after one hundred and forty years."

In investigating the phenomena of Nature, Dr. Balfour finds nothing which he can interpret as opposing the facts revealed to us in Holy Scripture; and

as this is sufficiently evidenced, without in the most distant manner approaching to cant or prudery, it renders this volume a most safe and valuable guide to the young, while sceptics might, if they would, derive a salutary lesson from the extensive series of evidences of the power, wisdom, and goodness of our Creator. As bearing on this subject, we quote the concluding paragraph of the body of the work:—

"When we find animals and plants of forms unknown at the present day, in all conditions as regards development, we read a lesson in regard to the history of the earth's former state as conclusive as that which is derived from the Nineveh relics (independent of Revelation) in regard to the history of the human race. There is no want of harmony between Scripture and geology. The Word and the Works of God must be in unison, and the more we truly study both, the more they will be found to be in accordance. Any apparent want of correspondence proceeds either from imperfect interpretation of Scripture, or from incomplete knowledge of science. The changes in the globe have all preceded man's appearance on the scene. He is the characteristic of the present epoch, and he knows by Revelation that the world is to undergo a further transformation, when the elements shall melt with fervent heat, and when all the present state of things shall be dissolved ere the ushering in of a new earth, wherein righteousness is to dwell."

The Appendix contains ample and well-digested instructions for collecting, preserving, and examining Botanical specimens; and a copious Glossary of fifteen pages, in double columns, will enable any beginner to make himself master of the subject as he peruses the book. The illustrations are admirable and numerous,—about eight hundred being contained in the volume before us, while upwards of one thousand will be found in the first volume.

We cordially recommend Dr. Balfour's Class Book as not only entirely trustworthy, but also admirably adapted to the wants of the Botanical student.

On the British Tritons. By John Higginbottom, F. R. S. From the "Annals and Magazine of Natural History," for December, 1853.

This little essay is the result of constant observations extending over a period of five years, and many very important facts are detailed in the accounts of the three species, which are all that Mr. Higginbottom looks upon as *fully* recognised in Great Britain. That the changes which each species undergo are more numerous than generally suspected, is clearly proved; and that they are four years in arriving at maturity is also shown. We are unable to give any long extracts, and must content ourselves with the author's summary of what he has proved.—

"1st.—That there are only two species of Triton in the midland counties of England.

2nd.—That the tadpole of the Triton remains in the water until the *branchiæ* are absorbed, and the legs become sufficiently strong to enable it to leave that element, and does not usually return to it again until the expiration of the third year.

3rd.—That during three years it is a land animal, in a state of activity in the summer, and of hibernation during the winter.

4th.—That the Triton is three years before it propagates its species, and four years in arriving at its full growth.

5th.—That it revisits the water in the spring for the purpose of reproduction, and leaves it early in autumn.

6th.—That fecundation is accomplished through the medium of water, and not by actual contact.

7th.—That a very dry or a very wet situation are both fatal to the Triton when in a state of hibernation.

8th.—That the habits and changes of the new Triton are in accordance with the other species."

The paper is illustrated by two plates, with nine outline figures of the three species described.

Proceedings of Societies.

Dorset County Museum and Library:—We have received from J. GARLAND, ESQ., one of the Secretaries of the Society, a short report for 1853; from which we are glad to see that the institution continues to receive increased support and encouragement. The additions made to the Collections and Library during the year have not been very large, but the proper arrangement of the Geological specimens is in progress. The circulation of books from the Library among the members has been considerable, and the council are desirous of obtaining additions from their friends, either as a loan or gift. Arrangements are being made for the delivery of Lectures on subjects connected with the objects of the society, and which, we have no doubt, will materially advance the study of Natural History in the district.

BRITISH MUSEUM NATURAL HISTORY

The Retrospect.

The Starling.—May I be allowed to offer a few remarks in vindication of my attack upon Mr. Longmuir's statement, in reference to the nidification of the Starling. In reply to that attack, Mr. L., with the help of an English dictionary, gives for my special instruction a definition of the word "excavate." Let me ask, when the Woodpecker commences operations upon a tree where no hole previously existed, does she not begin "excavating" or "hollowing out?" As the work proceeds, and approaches completion, is she not still "excavating" or "hollowing out?" And when she has completed her task, has she not "excavated" or "hollowed out a deep hole?" And is not this precisely what Mr. L. in his original statement informs us the Starlings in the neighbourhood of Aberdeen are in the habit of doing? In that statement no allusion whatever was made to decayed trees, nor was any mention made of pre-existing holes, unless the expression "it excavates a deep hole," be taken to mean that the "deep hole" was there before, and that the work of the Starling consisted in merely deepening it still further, which meaning he now finds it convenient to point out as the one intended to be conveyed. With a slight stretch of the imagination it may be made to convey this meaning certainly; but the more obvious one is the one I have applied, namely, that the Starling began the hole, and did the entire work from beginning to end; nor would it be unreasonable for those who might be but imperfectly acquainted with the bird in question, to infer that this took place in a sound tree, nothing having been stated to the contrary. Although it was not new to me, that to "excavate" means "to hollow out," it is entirely new to me, and I imagine must be so to others, that an "excavation" can be made, or that "hollowing out" can be accomplished without "boring" or "piercing," which according to the authority Mr. L. appears to have consulted, and to which he very modestly refers me, are synonymous terms. This would seem to be a secret known only to himself; I do not ask him to divulge that secret, it is but right that he should be allowed the quiet enjoyment of any benefits that may arise from his having made so valuable a discovery. Mr. L. in conclusion suggests "that in future a reference to an English dictionary would save considerable trouble." I venture to suggest to him in return, that to avoid all ambiguity of expression would also contribute to so desirable an end; and that in future no statement should be made which may tend either directly or indirectly to mislead those who may not be well-informed upon subjects of Natural History, and whose pecuniary resources may only enable them to obtain information upon these subjects through the medium of "The Naturalist."—S. STONE, April 8th., 1854.

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Communications have been received, up to June 17th., from J. P.;—G. R. Twinn, Esq.;—J. P. Fraser, Esq.;—R. A.;—J. Baker, Esq.;—W. G.

Contributions have been received, up to June 17th., from John Riddell, Esq.;—C. Thurwell, Esq.;—C. W. Rothery, Esq.;—J. Longmuir, Esq., Jun.;—J. W. Eccles, Esq.;—J. Dixon, Esq.;—W. Martin, Esq.;—S. Stone, Esq.;—J. Gray, Esq.;—G. B. Clarke, Esq.;—D. Ferguson, Esq.;—S. Hannaford, Esq., Jun.;—Rev. R. P. Alington.

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M.D., Driffield;—Books for Review, and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row, London.

ZOOLOGICAL NOTES.

We have received from John Fothergill, Esq., M. R. C. S., of Darlington, some extracts from a correspondence in the years from 1807 to 1813, between the late William Fothergill, Esq., of Carr End, in Wensleydale, and the late Charles Fothergill, Esq., a native of York. They are original papers on subjects connected with Natural History, consisting of notices of some rare birds; curious instincts in birds, quadrupeds, reptiles, and insects. Some suggestions on Ornithological classification, with sketches of several excursions in the pursuit of Natural History; and, occasional interviews with Naturalists.—B. R. M.

William Fothergill to Charles Fothergill, 1812.

Periodical Mortality of the Shrew.—"Pennant has remarked that the Common Shrew, (*Sorex araneus,*) is subject to an annual mortality in the month of August, when numbers are found dead by the sides of roads, particularly footpaths, in the latter part of summer. I can corroborate Pennant's testimony from my own long observation, but I do not attribute the mortality to disease. Domestic Cats ramble in the night from one farm-house to another, and from one village to another, in quest of their prey, or in pursuit of their amours, and, though they will kill Shrews wherever they meet with them, very few, if any, will eat them; and they are consequently found in the situations where they were killed. That more are observed dead about the month of August than any other part of the year is what we may naturally suppose, as at that time, the young Shrews having left their nests, they are more numerous; and the meadows being cut, and the aftergrass not arrived at its full growth, they, not having so much cover, are more exposed, and more frequently destroyed by the watchful cat, than at any other season. This is the manner in which I have long accounted for the fact; whether I am right or wrong will be discovered by future naturalists."

Charles Fothergill to William Fothergill, July 18th., 1812.

"Thy mode of accounting for the mortality amongst the Common Shrews, at a certain time of the year, is satisfactory, and perfectly accordant with my own view of the matter."

Charles Fothergill to William Fothergill, January, 1809.

"The newspapers' account of one of old Bishop Pontopidam's Sea Serpents of enormous size, being cast up on the shores of one of the Orcades, made me wish I knew how to discover the truth of this matter. The account reminded me strongly of the report of a captain of one of our northern traders, who assured me with all due gravity of countenance, that being off the coast of Shetland one fine summer's day, whilst standing near the helm, to his

BRITISH MUSEUM NATURAL HISTORY.

great surprise a Sea Serpent appeared on the surface of the water in his wake, which laid hold of the rudder by its mouth, and stretched out its vast length so far to windward that he could not see the termination; he seized his telescope, but could not even then discern the extremity of this wonderful animal. I felt inclined to inquire into the genealogy of this bold narrator, not doubting that he was lineally descended from the famous Baron Munchausen! But I satisfied myself with a smile."

William Fothergill to Charles Fothergill.

Fishing Cats.—"When at Masham on my last journey to York, having a little time to spare, I went to chat an hour with Julius Cæsar Ibbetson, the painter, who is known as an artist rising in fame; he has been in most parts of the world, and is both intelligent and communicative. In the course of conversation, he said, if I stopped all night, I might see a great natural curiosity, which was, Cats catching fish for themselves. There is a mill near the town, which, when stopped in the evening, the water being turned off, leaves a shallow stream abounding with small fish; at which time, several Cats regularly attend, boldly pushing into the water and fishing till they are satiated; and often kill more than they eat. This practice has been long continued by a succession of Cats."

The following was published anonymously in a provincial paper of rather limited circulation, and is consequently not well known.

"In my garden, at Carr End in Wensleydale, there is an Alcove, in which a seat is fixed, and which is the most public and most frequented part of the garden. In this recess, in the spring of the year 1809, the imp of a bee-hive happened accidentally to be suspended; on the upper rim of which a pair of Flycatchers, (*Muscicapa grisola,*) built their nests and reared their young, apparently regardless of frequent interruptions by the family. The imp being suffered to remain, and the old nest taken away, in 1810 a pair of the same species again made their nest, and succeeded in rearing their young, and have continued to do so in each successive year; and at the time of writing this, July 2nd., 1813, there is a half-fledged brood in the nest. This situation being apparently so unlikely to be selected as a place for incubation, is it not improbable that it should be annually chosen, except by the individual birds which first made use of it, or their immediate descendants.

Will not the above fact excite in the mind of the experienced ornithologist, the following, or similar queries? Do all birds of passage annually return to precisely the same situation which they occupied the preceding year. Or, is it peculiar to this species, and perhaps some of the *Hirundinæ?* If these interesting little travellers do annually return to the same place, by what beacons, by what way-marks are they guided? Instinct, a term too often resorted to

in order to hide our ignorance, will not properly apply in this case, though it will to the general act of migration, that being most probably necessary for the preservation of the species; and to enable them always to enjoy a climate best adapted to their allotted mode of life. But there does not appear any assignable reason why, after landing, they may not set about the great business of incubation in one place as well as another."—WILLIAM FOTHERGILL, Carr End.

WILLIAM FOTHERGILL TO CHARLES FOTHERGILL.

Rooks and Pine Martins.—"In a rookery at Deepdale in Craven, Yorkshire, about forty-four years ago, a Pine Martin was shot in the very act of devouring young Rooks in the nest; the tree in which the circumstance happened, had at that time, as usual, a great number of nests in it. It is yet standing, in almost the centre of the rookery, and in every respect as likely to have nests as any other tree in the grove; yet from that year to the present, 1812, it has been wholly forsaken, though the Rooks continue to build in the surrounding trees. Are Rooks birds of such longevity that some of them are yet in being that remember the fact, and warn their descendants? Or, have they the means of communicating traditions from one generation to another? Or, is it merely accidental?"

CHARLES FOTHERGILL TO WILLIAM FOTHERGILL, July 18th., 1812.

"At York, I understood thee to say, that the rookery visited by the Pine Martin was in Langstrath Dale, but now thou mentionest Deepdale in Craven. Didst thou ever observe that Buffon positively says we have no Pine Martins, because we have no woods in England! I remember a very fine specimen being killed in Kexby Woods, near York, that was first in Walker's, and is now in Mr. Haworth's museum, at little Chelsea."

WILLIAM FOTHERGILL TO CHARLES FOTHERGILL.

"Thy recollection was correct that I said, at York, the rookery visited by the Pine Martin was at Langstrath Dale. The fact is, Deepdale is in Langstrath Dale, nearly opposite to Raydale. I can now tell thee the Pine Martin is no rare animal here. Since I wrote to thee, I was informed that they had, at Raydale, the skins of three Sweet Marts, meaning the *Mustela Martis*. I took an early opportunity to go and see them, and was much surprised to find them all Pine Martins. They were taken last winter and spring; two were shot in a tree, and one taken in a hollow tree where it had its young. When Henry Pierse, Esq. was in the dale this shooting season, he called upon me as usual, and I told him what curiosities he would find at Raydale. His reply was, 'come and dine with me and you shall have them all;' which I did, but only accepted one of them. Pennant says, 'in Scotland they have only the Pine Martin,' and I now fully believe we have no other sort in

this part of the county. I well recollect Buffon's denying them to be natives of Great Britain *'Parce qu'il n'y a pas de bois.'* And Pennant shrewdly observes that gentleman never did our kingdom the honour of making a progress through it."

GLEANINGS FROM MY NOTE BOOK.—No. 3.

BY J. MC'INTOSH, ESQ.

Musical Animals.—The fabled feats of Orpheus are not perhaps so wondrous as at first they appear; certain notes, for example, sounded on a flute, or other wind instrument, will cause a dog to set up a lamentable howl. A lady friend of mine some years ago, possessed a Russian Terrier, which would sit on its hind quarters, and howl as long as she was playing the pianoforte, evidently from the pain it produced either on the ear itself, or on the nerves connected with it. The war Horse seems to derive new life and vigour from the sound of the drum and the trumpet; and it is well known that at the circus, the horses will not pace regularly without music. Outrageous cattle have likewise been calmed into gentleness by music; of this musical feeling in Oxen, Mr. Southey gives a singular instance in his letters from Spain:—The carts of Corunna made so loud and disagreeable a creaking with their wheels, from want of oil, that the governor once issued an order to have them greased, but it was speedily revoked, on petition of the carters, who stated that the oxen liked the sound, and would not draw without its music. In the southern counties of England bells are still fixed to the collars of waggon horses, who seem exceedingly proud of them. Birds are well known to be fond of music, and will pipe to the bird-organ. Even fish, upon good authority, independent of Amphion and the Dolphin, and of the old harper, who, as the ballad has it, 'harp'd a fish out o' the water,' are said to have shown signs of having been affected by music; and Seals crowded to hear a violin, as we are told by Mr. Laing, in his voyage to Spitzbergen; Scoresby, Junior, also tells us that music, particularly whistling, draws them to the surface, and induces them to stretch their necks to the utmost extent so as to prove a snare, by bringing them within the reach of the shooter. *Gaudabunt carmina phocæ,* says Valerius Flaccus, which Sir Walter Scott translates—

> Rude Heiskar's seals through surges dark,
> Will long pursue the minstrel's bark.

Some years ago I had a Cat which would follow me by my whistle, and if in the house, the instant I commenced whistling, the Cat would come and spring upon my shoulder, where she would sit till I had done, evidently much pleased with the sound.

Do Rats leave Dangerous Places?—The statement made by the mate of the schooner "Dewdrop," of Whitby, which was wrecked off Arbroath, would

seem to answer this question in the affirmative. He says, the vessel had for a long time been infested with Rats; but on the night before they left Hartlepool on their fatal voyage, the whole vermin disappeared, not a single Rat being seen, when the day before, they might be seen in dozens.

Lampyris noctiluca, (Glow-worm.)—Entomologists in general have stated that this insect affects damp woods and hedge-rows in preference to dry places. This may be true, but not so with our observations; we have never met with them but on *dry* banks and hedge-rows, and on heaths. They are particularly abundant in some parts of Dorsetshire, on dry chalky banks and hedge-rows; in Surrey on heaths, and in Somersetshire, as far as our observation goes, on dry hedge-rows.

The Sparrow in Asia.—As we advanced, we put to flight flocks of Sparrows, which had been tempted to take up their abode in these grottoes by the grains of millet scattered all about in profusion. The Sparrow is a cosmopolitan bird; he is found wherever man is found, and his character is everywhere the same; but in Tartary, Thibet, and China, he is perhaps more impudent than in Europe, for his nest and his brood are always religiously respected, and he enters every house quite at his ease, and picks up whatever he can, from the food of the family. We hope this example will be followed by his enemies in this country.—"Huc's Travels in Tartary, etc."

Happiness of Animals.—It is impossible to view the cheerfulness and happiness of animals and birds without pleasure; and it is astonishing how much man might do to lessen the misery of those creatures which are given to him for either food, use, or pleasure, if he were so inclined; instead of which, he oftener exercises a degree of wanton tyranny and cruelty over them which cannot be too much deprecated, and for which, no doubt, he will be one day held accountable.

5, *Middle Street, Taunton.*

SPRING BIRDS.

BY O. S. ROUND, ESQ.

This spring I have made the same observation that I think is made by Gilbert White somewhere in his charming letters, that the cold weather which generally nips our hopes of warm weather almost in the bud, affects our newly-arrived birds of passage in a strange manner, and they literally disappear after we have seen them basking in the sunshine of a fine young April day, and listened to their novel notes, strangers to our ears for perhaps seven months past, for there is little music from them after August.

Now, of course we cannot suppose that they take a flight across the Spanish territory, and so find their way to Africa again, or whatever warmer region they may retire to, when our frosts fairly scare them from our shores; but certainly they do vanish in a most unaccountable manner. This year

I was led most particularly to make this observation. March and April, up to the middle of the latter month, were almost unprecedently warm, fine, and still; and on the 5th. of April, as I was walking with my father in the fields, I was attracted by a well-known 'twitter' overhead, and there was a Swallow toying about at a short height just over us; I suppose we watched him for a quarter of an hour.

When we returned home, we were sauntering round our shrubbery, and a Blackcap came out of the laurels, and perched on a bare Mountain Ash, higher than the other shrubs, as I have observed to be their wont, and sang delightfully. The Chiff-Chaff I think I never heard so noisy, if it is not an improper expression, and one in particular all through. March seemed never weary of telling his whereabouts, at the top of some lofty beeches, from morn till night.

On the 6th., a little girl from the village, (Sunninghill,) brought word that she had heard the Cuckoo, and my brother the same day heard it too. The Whitethroats soon made themselves heard in the hedge-rows, and the Wryneck, which always haunts an old thorn near our grassplot, was more garrulous than usual, (by the way, it is about us called the Pea or Pee-bird, I suppose because its note is like 'pee, pee, pee,' often repeated.) From this time I occasionally saw a Swallow, and the Cuckoo was heard at intervals, but on the 20th. rain, which we had had none of for nearly ten weeks, came, and with it a total change of weather, which became so cold that icicles several inches long hung from our spouts, and the leaves of all the young Chesnut trees and Fuschias were cut off as black as tea-leaves.

Not a summer bird was to be seen; of course they were somewhere 'sad and silent,' but they hid themselves marvellously well; no Cuckoo, no Swallows, no Whitethroats or Willow Wrens, no Blackcap, in short winter had returned with its dead silence, and I expected to find my solitary Swallow dead by the pond-side, like the youth in Æsop; one Swallow truly does not make a summer! Even my pretty Chiff-chaff seemed out of spirits, and even the return of warm weather, upon which, however, we must not plume ourselves, has not restored our early visitors, but I suppose they will shew themselves again shortly. May the 2nd. was a cheering day, and the genial rain will set all going again; I heard sweet *Luscinia* in a copse as I drove to the station.

Lincolns-Inn-Fields, May 3rd., 1854.

LOCAL JOTTINGS.—No. 12.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

Spring Appearances.—The weather having been unusually mild and beautiful of late in this neighbourhood. I am enabled to record the following appearances etc., from my notes this year.

Primrose, (Primula vulgaris.)—At Cerne on the 10th. of March.

Violet, (Viola odorata.)—At Frome on the 5th. of March.—Very early.

Small Tortoise-shell Butterfly, (Vanessa urticæ.)—Common at Sandsfoot Castle, Weymouth, on the 17th. of March.—Very early.

Horse-Chesnut, (Fagus sylvatica.)—In the South or Chesnut Walk. Buds on the 28th. of March.

Elm, (Ulmus campestris.)—In Wollaston Field. Flowers in April.

Great White Butterfly, (Pontia chariclea.)—In Frome Meadows. Abundant on the 9th. of April.

The Snake, (Natrix torquata.)—I have met with several of these interesting animals of late years, of all sizes, and watched their habits etc, and still I cannot pronounce that the swallowing their young is a mere fable; although I confess I know of no evidence except my own imperfect observations recorded in page 233 of volume ii. of "The Naturalist." I had not intended at first to have noticed the attack contained in page 55 of the present volume, emanating from Mr. Westcott, as I conceived that the feeling and spirit evinced thereby were not worthy of retort, and I gave him credit for a morbid wish to "tease" a brother naturalist, as it seems he had done "for an hour together" the unfortunate Snakes coming under his observation with a view "to make them bite."

I may not be in *his* acceptation of the word a *true* Naturalist, I only pretend to be a true "Lover of Nature," and as such consider it my duty to pen my jottings, however inconclusive they may be, with the desire of inducing others to do likewise, and thus extend a study so delightful as that of Natural History.—I regret I did lose sight of the place which Mr. Westcott says I ought not, but I acted on the spur of the moment, as probably many others would have done. I merely wished the inquiry to be followed up by others with more opportunities than my limited time for amusement and recreation affords.

I must here thank my doughty champion, Mr. Kidd for his kind remarks at page 153 of the fifth volume of "Our Journal" in a Review of the present Work; and I assure him I intend taking his advice in the concluding paragraph *sans peur,* although I am sorry to say, I cannot add that I have hitherto always been successful in doing so, *sans reproche.*

Dorchester, April 10th., 1854.

We are sorry our friend Mr. Garland should have felt annoyed at the remarks alluded to; we are sure that the writer intended no offence when he penned them.—B. R. M.

A LIST OF THE LAND AND FRESH-WATER SHELLS FOUND IN THE NEIGHBOURHOOD OF EXETER.

BY MR. EDWARD PARFITT.

According to the promise I made in my first communication to "The Naturalist," I now give a list of the Molluscous Animals inhabiting our rivers and ditches, as well as the land and woods of this neighbourhood; at the same time, I beg to state that I am sure more will or may be added to the list. If some one living in Exeter, or in this part of the county, would take upon himself to explore the ditches in Exminster marshes, which laying in near proximity to the sea, I think it possible that our list would be much increased by their researches. I am myself so confined by my occupation, that I have not the time to devote to the several branches of Natural History, which my will and mind grasp at; consequently I must be content with what can amuse and instruct me in my own immediate neighbourhood, with now and then a dart into the surrounding country, something like the points of the angles of a star, shooting out from a common centre. Having said thus much, I will proceed to give the aforesaid list of the Land and Fresh-water Shells. Some time or other I may say a word or two on the Marine Shells and Zoophytes, which I have taken, or have been cast ashore on Exmouth Warren, during my peregrinations to that immense bank of sand.

First then is *Paludina achatina:* this is very common indeed in the Exe; they are sometimes brought down the river in times of flood, or at least very high water, and deposited at what is called the Lower Weir, by the Salmon pool, so that many barrows (I had almost said cart-loads) might be taken away were they of any particular use. *Bithinia tentaculata:* this is also particularly common in low meadows and stagnant waters. *Valvata piscinalis*: this is not common; I have only met with two or three. *Arion ater:* this species is not particularly common, at least I have not seen more than three or four. I met with a very beautiful variety, of what I suppose *A. hortensis*, last autumn, on the Topsham road, not far from Exeter; it was of a bright orange-red colour, with a broad, irregular, longitudinal streak, reaching from the anterior part of the mantle to very near the tail, of a beautiful bright umber colour: this colour contrasts so greatly with the bright orange red of the rest of the body, that it gives the slug a very beautiful appearance. I have seen two of these, and both precisely alike, but I unfortunately did not preserve them; but the next that crosses my path, will very probably find its way into a bottle of Goadby's fluid.

Limax maximus is very common in gardens, outhouses, etc. *L. slavus* is not so abundant as the former, but several of these are to be met with very frequently where they are not wanted. *L. carinatus:* this species is frequent about here, in gardens. *L. agrestis* is much too common. *Vitrina pellucida* is rather abundant in pleasure grounds, in damp places amongst leaves; and I have to record the finding of *Testacella haliotoides* in this neighbourhood;

I am not aware of its having been found here previously to the discovery of it this winter. It was found in Messrs. Veitches' nursery, by one of the men when digging a piece of ground; and knowing that I was curious in these matters, he gave one to me, and a fine specimen it is. The same parties met with several others, but much smaller than the first; I have found them myself some ten years ago, in the Durdham Down nurseries at Bristol, which is, I believe, the first place they were found in in this country: they were supposed to have been imported with some plants from Teneriffe.

Helix aspersa is very much too common. *H. hortensis* is very abundant also; I met with what I consider a curious variety of this species, the body of the animal, yellowish green; foot on the upper sides, dark greenish yellow, darker towards the margin, the bottom of the foot black; the long tentacles, pale yellow; short ones, nearly black; eyes, black. The shell of this variety is about the size of *H. hortensis*, of a pale yellow colour, precisely like the yellow variety of that species, but my variety differs in having a brown polished mouth. The animal, as you will observe, too differs very much in colour from *H. hortensis;* can it be a hybrid between *H. hortensis*, and *H. nemoralis? Helix arbustorum* is not common, at least I have not met with more than seven or eight, and these were found in Matford lane. *H. fusca:* two specimens of this species on Exmouth warren are the only ones I have seen. *H. aculeata* has been found in Stoke wood, by the Rev. T. Hincks, but I believe that gentleman only found one specimen, which he showed me: I have myself hunted the wood several times, hoping to have met with it, but have each time been disappointed.

H. hispida is particularly abundant in gardens about Exeter; also *H. concinna* and *H. depilata:* (to me a doubtful species.) I have had *H. rufescens* from Torquay, but have not met with it here. *H. virgata* is very numerous indeed on the short grass, near the old lime-kilns at Counties Weir. This species varies considerably in its markings, as it does also in size, for I have met with specimens on Teignmouth den, half as large again as those found further from the sea, and here they have a greater abundance of food than those found near the beach. What can make the difference in this larger development of growth and shell, can it be the more equal temperature near the sea, than at the more inland stations? *H. caperata:* this is frequently to be met with, very often in company with *H. virgata.* In the more inland stations *Zonites rotundatus* is very common everywhere. *Z. alliarius:* many specimens I have met with in Stoke wood, all of which have given out a very offensive smell of garlic. *Z. cellarius* very common and very fine. *Z. lucidus:* I have only met with two specimens of this; they were found in a wet meadow near the Exe.

Succinea putris: this shell does not appear to be very common, though I have found some very fine specimens by the side of the canal. *S. Pfeifferi:* this is common by the side of the canal and ditches in Exminster marshes. *S. oblonga:* I, last year, found three or four specimens of this shell in the

salt-water marshes near Topsham it is not a common shell about here.

Bulimus obscurus: this does not appear to be of frequent occurrence, for I have only met with about half a dozen. I may mention in this place that *Bulimus Goodalli*, has naturalized itself in the stove at Mr. Pince's nursery at Exeter. The animal inhabiting this shell is very interesting; it appears very active amongst the damp moss at the hottest part of the stove, where some *nepenthes* were growing. The little animal is of a bright yellow colour.

Zua lubrica does not appear to be common, as I have only found three specimens. *Pupa umbilicata* is very plentiful at Counties Weir. *Clausilia nigricans* is very abundant in every hedge. *Carychium minimum:* common amongst decayed leaves in damp ditches. *Limnœa peregra* is very abundant; as also *Vr. I. L. palustris* is also common in many places round Exeter. *L. truncatulus:* numerous in several places.

Ancylus fluviatilis: abundant and fine in a shallow brook which runs through Alphington. *Velletia lacustris:* common in the Exe, on aquatic plants. *Physa fontinalis* does not appear to be very plentiful, I have met with some good specimens in a ditch by the Exeter railway station.

Planorbis albus is common in the canal. *P. marginatus:* common in ditches, etc. *P. vortex* is also common in ditches etc. *P. spirorbis:* very rare, I have only met with one. *P. contortus* is very abundant.

Cyclostoma elegans I have not met with here, but I have had it from Torquay. *Cyclas cornea* is very abundant in the Exe: at times, when there is a great fall of water, these shells are brought down in immense quantities.

Pisidium pusillum: I found one specimen of this in a ditch at Counties Weir, May 22nd., 1853. *P. amnicum:* I had a tuft of *Tsolepis setacea* brought to me by a person who wanted the name of it, and in the tuft was a specimen of this shell; it was taken from Stoke wood.

Anodon cygneus is very fine and plentiful in the Exe; also a variety very much like *Vr. VI. complanatas*, though not so beautifully coloured as that variety, and is rather more produced at the syphon end.

Alasmodon margaritiferus: I have found several of this species in the Teign, near Dunsford.

Thus concludes my meagre list of Land and Fresh-water Shells.

I have just been shown a number of the "Zoologist," for January 1854; and at page 4176, it is stated that Mr. Foxcroft had reared some Ichneumons called *Tryphon nigriceps*, of Gravenhorst, from the cocoons of *Trichiosoma lucorum*, and the Ichneumon is new to Britain. Now I beg to say that I reared, and much to my annoyance at the time, some of these *Tryphons*, from cocoons of *Trichiosoma lucorum;* taken from a whitethorn hedge at Heavitree, near Exeter, in January, 1852, and the Ichneumons came out in the June following, that is June, 1852. I was not aware that the *Tryphon* was new to the British Fauna, otherwise, I should have made it known at the time; but, as it is, I think I am entitled to the priority.

There is one thing I wish to observe in regard to the specific name of

this *Tryphon;* I think *nigriceps* a bad name for it, as all Entomologists are aware that numbers of the Ichneumons belonging to different genera have black heads; black, generally speaking, is the prevailing colour in most of the species belonging to the great family of Ichneumonidæ. It is true there are several exceptions to this, such, for instance, as *Ophion lacteum,* and several others; but still there are several genera, as well as species, bordering so near upon each other in external appearance, that it is a matter of the greatest difficulty to give a good grapic description: indeed, without the aid of figures, it is almost impossible to avoid confusion. I think, myself, it would be the best way for authors, in naming such species as *Tryphon nigriceps,* to give them a name indicating the species of insect on which the Ichneumon is parasitic, for, so far as my observation goes, it is a very rare thing to find more than one species of Ichneumon attack the same species of caterpillar, larvæ, or eggs; therefore, I think, that would be the best course to pursue, though I can see a great many difficulties looming in the distance, but still, the subject might be made something of in abler hands than mine.

Exeter, March 13th., 1854.

NOTES ON THE RASPBERRY PLANTS FROM SEED FOUND IN THE STOMACH OF AN ANCIENT BRITON.

BY J. MC' INTOSH, ESQ.

At page 45, volume iv. of "The Naturalist," for the current year, your correspondent, Mr. J. E. Smith, writing on the Vitality of Seeds, is in error when he says that "Professor Lindley was present at the opening of the Ancient 'Saxon Tomb,' from which the raspberries were raised, which are now said to be growing in the Horticultural Society's garden." The facts are as follows:—

A dentist living at Dorchester, Dorset, of the name of Maclean, anxious to prosecute some scientific inquiries bearing upon his profession as a dentist, obtained permission to open a barrow in the neighbourhood of that ancient town, near to Maiden Castle, in which he found, at the depth of thirty feet below the surface, not only the teeth of Ancient Britons, the chief object of his search, but he also discovered, laying in what seemed the cavity of the abdomen of a skeleton, a quantity of a substance, which turned out, upon investigation, to be the seeds of raspberries, some of these seeds were planted in a pot, and placed under the care of Mr. Hartwig, then employed in the gardens at Chiswick. Four of these seeds germinated, and the plants were preserved and grown therefrom, and which, we are told, are still in those gardens. Wishing to collect all the matter possible on this interesting subject, I wrote to my friend the Rev. W. Barnes, of Dorchester, a gentleman whose knowledge and abilities require no mention at my hands. His statements in the following letter will, I think place the truth of this question beyond all doubt.

"In answer to your letter, by which I find you are seeking for confirmation of the account of the raspberry seeds, which were found some years ago in a barrow near Maiden Castle, by Mr. Maclean, I am very happy to place at your service my small share of evidence in his behalf. About the year 1835, and I believe some few years later, Mr. Maclean was in lodgings on the Cornhill, Dorchester, and I often talked with him on subjects of animal and vegetable physiology, as well as on the Gaelic language, which I wished to compare with Welsh, and which was his mother tongue. At one time, when I was at Mr. Maclean's rooms, he showed me some pieces of brownish earth-like matter, of rather cylindrical form, and hard throughout, though, as I thought, still more hardened at the surface. He pounded some of it in my presence, and showed me that a large proportion of it consisted of plant seeds. He told me he had found it in some jaw-bones, in a barrow which he had found somewhere near Maiden Castle; and that from its form, its matter, and its place in the barrow, he fully believed it was a portion of the contents of the colon of the man whose jaw-bones he had found near it. He told me that the teeth on the jaw-bones were those of an old man, but that none of those bore signs of caries, and were worn down to the gums. I am sure I am not mistaking these circumstances, for they afterwards formed the subject of much thought, in which I at length drew a conclusion, which might have been too hasty a one, that the only appearance of caries in the teeth of civilized tribes, and especially of our own race—the Teutonic—was owing to high feeding, if not flesh-eating, and therefore I rejected flesh food through an interval of many years.

Mr. Maclean told me he had sent some of this seedy half-coprolite substance to some botanist—I believe Dr. Lindley; and at another time he showed me, as it seemed, with much pleasure and pride, a spray of a raspberry plant, which he said had sprung from one of the seeds of the seedy substance which he had shown me as the contents of the colon of an Ancient Briton, and that the sprig had come to him from the gentleman to whom he had sent the seeds, and under whose care they had germinated. And, lastly, I once called upon him, and found in his room two or three of the labourers who had opened, under his own eyes, the barrow in which the seeds were found; and he told me they had just signed a declaration of their knowledge of their finding of the seedy substance in the barrow, and, as I believe, though I did not hear the declaration of its manner and form, and relative place. I fully trust in Mr. Maclean's good faith through the whole of the transaction, and know, or believe most confidently, that he opened a barrow near this town, and that he found in it the seedy substance which he showed as what he thought the contents of the colon of a Briton who was buried in the barrow; and that he sent some of it to some gentleman in or near London; and that he afterwards received from him a twig of a raspberry plant, which he was told, and believed, had grown from the seed of it. Mr. Maclean is now dead. The "Gardeners' Chronicle" makes Mr. Maclean to have said 'he found a *coffin*

in his barrow." I never heard that he found anything like what we call a coffin, though he might or might not have found a *kist-vœn*, and might have called a kist-vœn a stone coffin. There is not, I believe, any reason to believe that any of the Ridgeway barrows are the graves of a later tribe than the Ancient Britons or Belgæ.

I am, etc.,

August 21*st*., 1852. WILLIAM BARNES."

In addition to the above I beg to add that of another friend, James Frond, Esq., also of Dorchester, in whose house Mr. Maclean lodged for some time. Mr. Frond says—"It is with pleasure I bear testimony to the following:—Mr. Maclean, who has been dead now some years, was a man of great natural talent, persevering industry, a good botanist, and as a dentist stood high with the profession and the public generally. The devotion with which he pursued his profession induced him, on every possible occasion, to be an eye-witness at the opening of any of the barrows in the vicinity of Dorchester; hoping thereby to procure some specimens of human *teeth*, which might confirm his previously formed opinion that the Creator intended that those important parts of the human frame should survive every other, and that unless interfered with, either by taking deleterious medicines, or the use of acids, as articles of diet, or tooth-powder, teeth may *wear*, but would *never decay*. It was, then, as a useful member of his profession, that he was led to witness the opening of barrows, and it was the accidental finding something resembling seeds that excited his botanical propensities, and induced him to preserve, for future investigation, the mass in which the seeds were imbedded. I was not present at the opening of the barrow, but have the most *distinct recollection* of Mr. Maclean bringing home and showing me the *teeth*. and a mass of something containing what he thought to be seeds of fruit, eaten by the person shortly before death. He then told me that he should either send or take to London the mass he had found, and leave it with some parties who, in all probability, would be able ultimately to determine the character of its contents, and this I know he did, but from that time to the present I had lost sight of the subject altogether; for Mr. M., who had been with me three or four years, soon after left my house for a more central part of the town.

Dorchester, *August* 28*th*., 1851. JAMES FROND.

To what I have already advanced on this interesting but disputed subject, I will make a few quotations from a letter published in the "Gardeners' Chronicle," from Dr. Smith, M. D., Weymouth, whose letter is doubly interesting, he having been an intimate friend of Mr. Maclean, and in possession, I believe, of Mr. M's. papers, through Mrs. Maclean. Dr. Smith says—"I had the pleasure of knowing Mr. Maclean intimately, for a period of four years before his death, I attended him professionally during that period, and I am not saying too much for departed worth, when I express my firm belief that he

was a man perfectly free from guile or deceit; in fact, that no two meanings or false pretences ever attached to any assertion he made. I have often conferred with him on the subject of the fossil seeds in question, and have walked with him over the very spot, where he told me he had found them at the depth of thirty feet. I recollect his remarks, as if they had been only spoken yesterday, "in this barrow, Doctor, I found the seeds I told you of, and from which were reared the raspberry plants I have showed you the two dried specimens of; and yet Dr. Lindley, to whom I gave the seeds from which these plants were raised, has never thought it worth his while to mention my name or me as the discoverer.'"

For the truth of this assertion I beg to refer my readers to "Lindley's Introduction to Botany," published in 1835; when the first notice of these seeds appears to the public, Dr. Smith again says—"I have seen a letter from Dr. Lindley, dated 1836, on this subject, to Mr. Maclean, and a copy of the letter of the latter in reply, together with a copy of a certificate of the labourers employed by Mr. Maclean, in proof of the fact."

These facts may be thus briefly and simply stated; that Mr. Maclean did open a barrow near Dorchester, at or near the encampment known and called "Maiden Castle," and one of the most perfect encampments in the West of England; in which barrow Mr. M. found the remains of a portion of a skeleton, from which he took a mass of matter containing raspberry seeds; a portion of which was sent to Dr. Lindley, who placed them under the care of Mr. Hartwig, then employed in the gardens at Chiswick, near London; four of these seeds germinated, and produced the common raspberry. Now, if we have as much proof from Dr. Lindley that the seeds were actually sown, and germinated, and produced the raspberries in question, as we have of Mr. Maclean finding the mass of seedy matter, the question as to the vitality of raspberry seeds, two or three thousand years old, is for ever a settled question. The above has already been published by me in "Notes and Queries," vol. vi., p. p. 535, for 1852, but as many of your readers may not have seen that interesting work, I have been induced to send them for insertion in "The Naturalist."

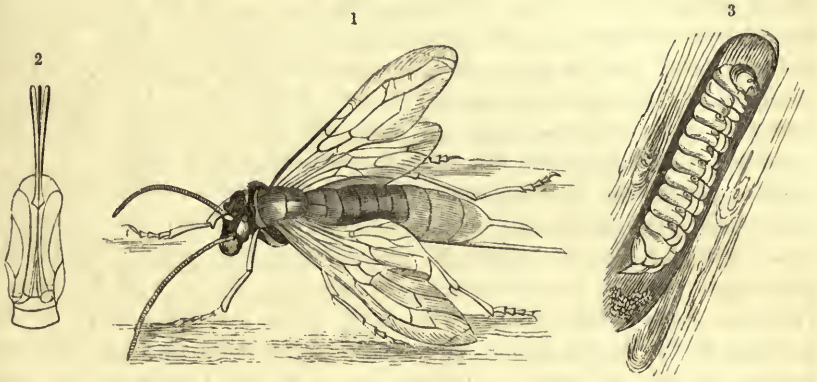
5, *Middle Street, Taunton, February 6th.*, 1854.

INJURIOUS INSECTS.—No. 2. *SIREX GIGAS.*

BY J. MC'INTOSH, ESQ.

The *Sirex gigas* belongs to the order *Hymenoptera*, and is a very destructive insect to dead trees and timber, particularly *Abies excelsa*. It is said to be very common in Sweden, and in the Alps and Pyrenees; of late years it has been met with in considerable quantities in England; we have ourselves taken it in Surrey, Hampshire, Dorset, and Somerset, in the act of depositing her eggs in timber. Our Fig. 1 represents a full-grown female, antennæ inserted near the forehead, thirteen to twenty-five articulations, mandibles denticulated

internally, maxillary palpi, very small, almost conical, with two articulations. The extremity of the abdomen is provided with a very strong horny ovipositor,



composed of three threads, Fig. 2, by means of which she deposits her eggs in the crevices of trees and timber. Fig. 3, represents a full-grown larva; these, when hatched, burrow into the wood in various directions; they are fleshy and cylindrical, with a scaly head, six very minute pectoral feet, and a horny joint on the upper extremity of the body.

There are two species of this fine genus in Britain, namely, *S. gigas* and *S. juvencus*, both of which we have captured in fir plantations at Claremont, in Surrey. A correspondent of the "Gardeners' Journal," thus describes the operation of our present subject:—"About the last week in May, in 1848, it made its appearance in the village of Whetstone, emerging from a large stick of fir timber, which had been brought from, and had grown upon, Enfield chase. This tree was in some places almost honey-combed with them. In the first week of July, I found a female insect in my yard, in Totteridge, busy inserting her eggs into the stem of an American *arborista*, which had been cut only a few days; she had evidently been attracted by the peculiar smell. I removed both stick and insect into a spare room, where for three days, she almost unremittingly plied her destructive operations, taking no notice of those who were narrowly watching her movements; when she fell off the piece of wood, she instantly flew to the window, and tried to make her escape, but no sooner was she brought in contact with the piece of wood than she seemed to lose all shyness and all wish to escape, and went on with her work. After walking along the rough bark a little way and feeling with antennæ, she seemed all at once to find a place suitable for her purpose, on which she at once disengaged her ovipositor from a sheath in which she usually carries it, and having firmly fixed her claws in the rough bark, she brought the point of her instrument to the place selected, and this she managed by raising up her abdomen by means of her hind legs; with one of these legs she guided the ovipositor till it was inserted a little way, after

which, having placed the leg at a proper distance, and it had become perfectly steady and quiet, no part of her body moved but the boring apparatus; she at first took about five minutes to sink a hole, but the second she took five or seven minutes, and the third day she seemed so much exhausted that she could scarcely sink a hole at all, often failing completely to pierce the bark; and the fourth day she died from exhaustion. The boring tool seemed to be a couple, at least, of saws laid flat upon each other, with teeth the reverse way, and the outsides something like a rasp."

These proceedings of the female *Sirex* are, we consider, quite sufficient to disprove the view of Count de Saint Fargeau, (see "Hist: Nat: Hymenoptera," tome i.,) that the *Sirídicæ* are parasitic upon other insects, like the *Ichneumonidæ*. Besides the structure of the mouth of the larva of the *Sirex* is eminently formed for feeding upon wood. Mr. Marsham relates on the authority of Sir Joseph Banks, that several specimens of *S. gigas* were seen to come out of the floor of a nursery in a gentleman's house, to the great horror of nurse and children. In this case the floor of the room could not have been long laid down, and the planks must have contained the larvæ of the *Sirexes*. Mr. Stephens says that the fir plantations of Mr. Foljambe, in Yorkshire, were destroyed by *Sirex gigas;* while the trees of another plantation belonging to the same gentleman in Wiltshire, met with a similar fate from the attacks of *S. juvencus*. We have been informed that considerable quantities of the males, of which species we are not quite certain, have been captured flying about the tower of York Minster, no doubt seeking the females.

Any further information on these interesting insects will be greatly esteemed by us.

5, *Middle Street, Taunton, February* 17*th.*, 1854.

DESCRIPTION OF A NEW COLEOPTEROUS INSECT BELONGING TO THE GENUS *PRIONUS*.

BY JOHN GRAY, ESQ.

Amongst a small lot of beetles, collected in the neighbourhood of Ava, which I received some years ago, there occurred a striking species of *Prionus*, apparently undescribed. As subsequent enquiries have satisfactorily confirmed this opinion, I have deemed it proper to record the species; and thus make another fine addition to the magnificent entomological fauna of the East. As it seems to agree, in all characters of *generic* value, with those of *Prionus* proper, I propose in dedicating it to the accomplished author of "The Cabinet of Oriental Entomology," to make it known under the name of

PRIONUS WESTWOODIANUS.

P. brunneus, Antennis acutè serratis, corpore paulò longioribus; Mandibulis incurvis capitis longitudine, extùs bidentatis, intùs inermibus; Thorace utrinque

trispinoso, punctatissimo; Elytris subrugosis, nervis obsoletis duobus, suturæ apicis angulo submucronato.

Of a brown colour, the head, antennæ, and mandibles pitchy. Head rugose, deeply grooved in front, punctate behind. Antennæ deeply serrated, extending over the elytra. Mandibles at the base deeply punctured, with a small double tooth on the outer margin towards the tip, inner margin smooth. Thorax with three spines on each side curved upwards and backwards, the two at the posterior angles small; minutely and thickly punctured with a slight keel running down the middle. Elytra finely wrinkled, with two slight ridges extending from the base nearly to the apex; and a third, short, and very indistinct towards the margins at the base; apex at the suture slightly pointed. Tarsi slender.

Length thirty-one lines. Hab: Ava, E. Indies.

The specimen above described is a female.

Glasgow, May, 1854.

UTILITY OF THE COMMON MOLE, (*TALPA VULGARIS.*)

BY J. MC' INTOSH, ESQ.

(*Continued from page* 50.)

THE charges brought against the Mole, by the generality of horticulturists, are equally as absurd as those we have already exposed in an agricultural point of view. It is, no doubt, teasing to the temper of the enthusiastic florist, to find, some morning, that this industrious little engineer has, during the night, driven a tunnel through the centre of his fancy tulip-bed, and perhaps upheaved a favourite prime bagnet or byblæmen; or in the kitchen garden, that he has upheaved some few onions, carrots, or other seeds; still, if he had not done so, some wireworm, grub, snail, or other noxious enemy, would have done him double, nay a thousand times more injury. It is quite absurd to accuse him of stealing acorns or other seeds. This charge against the unfortunate Mole no doubt arose from Buffon, who asserts that in the year 1740 he planted fifteen or sixteen acres of land with acorns, and that the greater part of them were, in a little time, carried away by the Moles to their subterranean retreats; in many of these, he says, were found half a bushel, and in others a bushel of acorns.

Now we are perfectly satisfied in our own minds, that if the great Buffon had minutely examined the point in question, he would have found that, instead of the Mole being the thief, the real ones were rats and mice. For the truth is, the Mole is exclusively, or nearly so, an animal feeder, he does not object to a bird, a lizard, a mouse, or a frog, if it comes within his reach; toads he rejects, even when famishing with hunger. In the extensive gardens at Dalkeith there are two borders in the kitchen garden of equal size; in one of these borders a Mole, for more than twelve months, took up its abode: at one end of the border was a hole, by which the Mole passed

out at night, in search of slugs and insects, returning again in the morning. Now both these borders were, at one time, so infested with wireworms, that the crops were continually destroyed. Traps for the wireworms were set in both the borders, and the results were, that, in the border where the Mole resided only two wireworms were detected, while the other, on three examinations, produced six thousand three hundred and sixty wireworms, the number of traps being one hundred and six, and the average number of wireworms at each trap twenty-one, and, at one taking alone, two thousand one hundred and twenty. This fact is, of itself, sufficient to convince the most sceptical individual of the utility of the Common Mole in gardens. Those who are still inclined to act on the offensive side, after what we have advanced in behalf of the utility of the Common Mole, should carefully read the following beautiful lines:—

"Distinguished much by reason, and still more
By our capacity of grace divine,
From creatures that exist but for our sake,
Which, having served us, perish, we are held
Accountable, and God, some future day,
Will reckon with us roundly for the abuse
Of what He deems no mean or trivial trust.
Superior as we are, they yet depend
Not more on human help than we on theirs."

Having gained "a verdict for the defendant," we will now turn our attention to some other points in the history and manners of the Mole. Perhaps it would be difficult to name an animal, with the exception of the Hedgehog, (*Erinaceus Europæus,*) that is the object of a more systematic and unrelenting persecution than our present object; and, if we are to draw our conclusions as to the policy of destroying this animal from the wisdom of the ancients in deifying their greatest Mole-catcher of the day, to whom they erected a temple in Œolia, then we would say both their policy and wisdom were much upon a par. Old Thomas Tusser, author of "The Five Hundred Points of Good Husbandry," appears to have been an enemy to this useful animal, when he says—

"Get the Moule-catcher cunningly Moule for to kill,
And harrow and cast abroad every hill."

Dr. Darwin, in Phytologia, hands down to us the celebrated Mole-catcher of his day, one Francis Paget, of Elston, near Newark, who invented and used traps similar to those now in use. Buffon appears also to have been an adept at the trade, for he asserts that he caught one thousand three hundred in one week. Velmont de Bomace recommended suffocating them in their holes by means of sulphur. De Vaux calculated that one-eighth of the whole produce of spring corn was devoured by this useful animal. Mr. Couch informs us in "Mag: Nat: Hist:" vol. viii., that a Mole-catcher, in Cornwall, took no less than one thousand two hundred in six winter months. Samuel Jackson, the notorious Cheshire Mole-catcher, asserts that he has taken the lives of no less than forty to fifty thousand of this innocent animal. But all must yield

to Le Court, the notorious French Mole-catcher, who is said to have destroyed, in the short space of five months, no less than six thousand, and that within a small district; and that two of his pupils, during the month that they were under his instructions, killed nine hundred and seventy one: we have acted enough of this wanton butchery. It is almost as foul as the late butchery at Sinope, which will for ever remain a stain that time, that great destroyer of human art, will never efface from European History. To use the words of the Rev. C. A. Bury, in his interesting notes on the "Mammalia of the Isle of Wight:"—"Man is too fond of meddling, and often blunders to his own cost. In his attempts at improvement he only disturbs the balance of creation. Granted that occasionally some species of animal, favoured by circumstances, either the scarcity of its appointed check (occasioned, perhaps, by the meddling hand of man,) or a superabundance of its natural food, may increase beyond due bounds, and so require the interposition of human force or skill, let that force and skill be then exerted; but I believe that this would be seldom necessary, things would right themselves. They have been generally found to do so, unless man has carried his meddling propensities to the extent of utterly extirpating the appointed check, for it seems to be a law of creation, that where there is food, there will be provided that which feeds on it, and that in just proportion. The Mole is evidently an appointed check to the undue increase of the earth-worm; it not only devours numbers itself, but by its burrowing, drives to the surface many more, which, in their attempt to escape the Mole, fall a prey to the Robin and the Thrush. The earth-worm, unquestionably has its uses, in drawing vegetable substances beneath the surface, and so the gases that are released in the process of decomposition, and which would otherwise be lost, are preserved for the nutriment of the growing plant, while the portion devoured by the worm is again thrown to the surface in the form best adapted for the nutriment of the plant above ground. Thus, then, all is well arranged by Divine Wisdom; but if man steps in, throttles the Mole, and shoots and snares the birds, he must, if he carries his interference far, produce a disturbance among God's works, to his own detriment." Notwithstanding the universal ban under which this useful and innocent animal lies, so bountifully does the Almighty supply its wants, and facilitate its increase, that it still remains one of the most numerous of all our British quadrupeds.

Although the Mole is frequently seen above ground, its province is essentially below the surface; there it lives, and moves, and has its being; there it procures its food; there it constructs its dwelling; and there it brings forth its young, with a care that would make many a christian blush. If we scan the almost infinite variety of nature's works, we shall not find a more admirable instance of adaptation than is afforded by this little animal to its subterranean abode.

5, *Middle Street, Taunton.*

(To be Continued.)

SINGULAR BREEDING-PLACE OF THE RABBIT.

BY A. S. MOFFAT, ESQ.

One beautiful day, last June, while rambling on Beanly Moor, I felt a little fatigued by the heat, etc., and climbed upon the top of a large irregular mass of rock, called the *Mill-stone Heugh*, to rest myself. The rock is of an irregular circular form, with a flattish inclined top, and presents somewhat the appearance of a huge uncouth mill-stone, hence its name. Upon the highest part of the stone is a small patch of heather growing, about three yards in diameter, and in the centre of this, I was not a little surprised to find a Rabbit's nest containing four young; thus placed, in comparative security, at a height of nine feet from the ground; while the inclined position of the rock made the ascent and descent, on one side, easy to the dam. It is well known that the usual breeding-place of the Wild Rabbit is in a short superficial burrow in the earth, the mouth of which the female takes the most assiduous care to cover over with soil every time she leaves it, to protect it from the observation of any enemy, as well as a seemingly unnatural propensity which most of the males have to destroy their young. Another example among many of the wise provisions of nature to prevent an injurious superabundance of a species so prolific. But in this case the means of such an attempt at concealment were totally disregarded and wanting, there being neither soil to dig a burrow in, nor anything to cover it with when dug. Hence the instinct of the parent animal must have suggested to it, that the safety of her progeny was depending altogether upon a different train of circumstances, from the novelty of the situation, and that the usual precautions were unnecessary in this case.

This case is certainly a singular exhibition of the almost half-reasoning power we occasionally meet with in the brute creation, and in this instance also by an animal not standing very high in the scale of intelligence; as she must have considered, if I may be allowed to use the expression, the exposed situation of the nest upon the surface of the rock, amply compensated for by its slight sheltering of heather, and by its elevation above the ground where its natural enemies were known to exist.

It is generally in the arrangements for the preservation and continuation of the species, that animal instinct exhibits its most marvellous contrivances and beautiful adaptations of means to ends, and makes its nearest approaches to reason.

Beanly, February 14*th.*, 1854.

NATURE AND HARMONY.

BY GEORGE R. TWINN, ESQ.

THERE is something peculiarly indefinable as well as soothing in the rich commingling melody of birds. Stand at a convenient distance from a sun-lit, but bright green coppice, with its neat surrounding hedges, and you shall feel your spirits all vitalized, your heart all palpitating with joy, and your thoughts all heavenward, as you enrapturingly listen to the full concert of a hundred bright-winged choristers. The soft sweet flood of gently dying cadences—soft as the blush on childhood's brow—or the dear lull of moss-fringed runnels, succeeded by the loud clear chorus of the blended songsters, in one burst of love and gratitude, shall convince you of the inherent harmony pervading nature's works, whether considered collectively, or in part. Does it not impress you with real admiration of the one pervading principle of music? all-befitting harmony,—no jarring discord—not one cry—not one note—not one stream of song—not one full hymn of joy contradicts, or neutralizes, or infringes on another, but gently do all the notes correspond, and the mutual end of every bird is realized; each lets his mate or little ones know his peculiar cry or song—each meets his wants; nor does the sound of one betray or mislead the other; hence on the same tree, the Blackbird from the topmost bough trills gaily out his note of rapture; high above him is the Lark, rending the air with melodies to entrance the ploughman into the belief of angels hymning in the midday air. Beneath the Merle's green perch, the Bullfinch with its flute-like music sings unto his partner, all the dream of young love; whilst in the holly bush beside, the Redbreast trills his ever-cherished lay. Around and everywhere the Gnat and Bee, the Blue-fly and the Grasshopper make their carols to join the concert of great Nature's ministers, that strive to gladden man, and call his thoughts from plodding things of earth, to muse on God and Heaven.

Ye who confess the existence of this Harmony through Nature's realms, I ask your kind indulgence in the coming season; spare the soft tribes, and let them

> —"Range the air,
> Or take their pastime in the spacious field;
> There they are privileged.

Reader, I would not wrong you in the least; but while science and knowledge loudly call you to a persevering discharge of your allotted tasks, I ask you not to be too severe, or too much of the exterminator; for, alas! alas! we are losing many a Bird and Butterfly, from our overweening pursuit and wholesale butchery.

Bawburgh Hill, near Norwich, March 20th., 1854.

Miscellaneous Notices.

Note on a Rook and Weasel.—Your correspondent's observations in the "Naturalist," for this month, respecting the Hooded Crow, remind me of a similar circumstance which occurred in this neighbourhood about two months since. As my son and another person were talking together in a field, they observed a Rook passing over with something in its mouth, and performing similar antics to those described by Mr. Cooper, eventually tossing it over its back, and falling to the ground; they immediately ran to see what it was, which frightened the Rook away; it proved to be a Weasel, not much the worse for its aerial excursion, or the attack of its assailant, as it directly made for a ditch, and eluded their further observation.—C. Wood, Dulwich, April 5th., 1854.

Note on the Greater and Lesser Spotted Woodpecker. The Lesser Spotted Woodpecker, (*Picus minor*,) remains with us through the season: it appears rather plentiful. The larger species, (*Picus major*,) I have only seen two or three times, and have not as yet been able to procure a specimen.—Idem.

Observations on Birds about Barnsley.—In the interval before the appearance of our summer birds from warmer climes, the following notes applicable to the past month, though taken in the early part of last year, may not be unacceptable, and if not new they may encourage similar observations.—February 10th. 1853. This morning I walked over Honey-well fields, and by the Dearne to Willow Pit Bank, returning up Smithy-lane. While observing a fine Missel Thrush (better known here as the Storm-Cock,) in the meadow below, now hopping briskly, then suddenly stopping, casting a wary look around; anon with tail elevated and head plunging downwards, digging with his bill into the ground for an earth-worm. As I was in the act of fixing my telescope upon him, and a pair of Great Titmice in the field of view at the same time, hopping on the grass in quest of their tinier prey, in the moment of shifting my point of view I saw the flutter of wings in the sky, which proved to be those of the Kestrel or Windhover, winnowing the air, then remaining steadily poised for some seconds, renewing at times this fixed position by a gentle flap of the wing, and then gracefully wheeling without perceptible effort, in a semi-circular flight, during which, as both back and front were exposed, I could discriminate, not only the light grey feathers of the tail and the head, proving the bird to be a male, but also the dark spots on the red ground of the body, so strikingly distinguishing the plumage from the handsome barred feathers which mark the female from head to foot. I turned down the lane towards Sykes' croft, and caught a nearer view of him from the railway bridge. He frequently descended with a sudden stoop upon the fields, but I could not see for the intervening hedges if any prize had repaid his efforts. During one of these disappearances, I saw another Kestrel hovering over the fields behind me. Presently, while I was concluding it must be the same bird, it was joined by the one I had been observing, and both disappeared over the shoulder of the hill, so that I could not ascertain if the other was a female. In a few minutes one of them flew back, and hovered over the former station; and being projected in a favourable light against Burton-bank, I readily perceived with the teleseope that it was the male bird again. I had not seen a Kestrel since summer, a proof that this most abundant and harmless of the Hawk family is sharing the extermination vowed against his race by the ruthless keeper and unthinking sportsman. Another point is settled, that the Kestrel as well as the Merlin, the observation of which was recently noticed, are both found in this locality in winter, both species being considered partially migratory to different parts of Britain.—T. Lister, Barnsley, February, 1854.

Late departure of the Cuckoo, (Cuculus canorus.)—I shot, on the 9th. of August, 1853, a male and female of this bird; immature specimens.—J. O. Harper, Norwich, April, 1854.

Occurrence of the Nutcracker, (Nucifraga caryocatactes,) *at Yarmouth.*—A male specimen of this bird, in good plumage, was shot at, or near, the above-mentioned town, the 12th. of October, 1853.—Idem.

Occurrence of the Red-necked Phalarope, (P. hyperboreus,) *near this city.*—On the 9th. of November, 1853, I had presented to me by J. Brownfield, Esq., a female specimen of this bird, which he had just shot skimming the surface of the river near Trowse Bridge, about a mile from Norwich.—Idem.

Occurrence of the King Duck, (Somateria spectabilis,) *on the Suffolk Coast.*—I received, of the 7th. of January, of the present year, a female specimen of this bird which had been procured from the beach at Lowestoff.—Idem.

The three last specimens were prepared by me as natural skeletons for J. E. Warwick, Naturalist, 23, New Street, Kennington Road, London.—Idem.

I observed Sand Martins, *(H. riparia,)* flying over sand-pits near this city, April 14th., 1854. Wind, S. E. And, on the following day, saw a solitary Swallow, *(H. rustica,)* near the same locality.—Idem.

Occurrence of the Dipper, (Cinclus aquaticus,) *in Norfolk*.—Mr. Knight, Taxidermist, of this city, received for preservation, on the 26th. of April, 1854, a fine specimen of this bird, which had, the day before, been shot at Lingwood.—Idem.

Observations on the weather for January.—There was rain or snow on nineteen days, but in general in small quantities, except on the 4th, 7th, and 8th,—first heavy snow, averaging from ten to thirteen inches, and in some places drifted by the high winds to such a depth, as to make some of the lanes and roads impassable; then sleet, changing to rain. The quantity fallen on the whole month was three inches—probably much more, as some of the snow flakes would be blown off the weather guage unmelted. The highest point of the barometer was 30 on the 26th, the lowest was 28 deg. 30 min. on the 8th. The highest point attained by the thermometer in the town was 52 deg., in the shade, on the 30th; in the country the same day it was 48 deg. The lowest registered in the town was 12 deg., on the morning of the 3rd; and in the country 9 deg., on the 2nd. and 3rd.—probably lower in the night. The winds have been from N. N. E. to S. S. E., S. W. and W., the last few days in great force. The severity of the frost during the limited period of its existence, was more intense than has been remembered by any one here. The pools, canal, and even the river Derne were speedily frozen, to the satisfaction of thousands of sliders and skaters. The ice was from seven to ten inches thick. It has been a hard time for the feathered race. Hunger has made strange companionship, and hard and soft-billed birds have flocked round the haunts of man, too often to their destruction, as a greater number of pitiless gunners have been at work than we suspected we had amongst us. Our winter visitants have been more than usually numerous. The Common and Jack Snipe, Redwings, Fieldfares, Wild-Ducks, Wild-Geese, Bramblings, and Siskins have abounded. The Little Grebe, and Dun Diver, (the female of the Mergus,) have occurred in the Derne valley. Woodcocks have been a little more plentiful than of late years. One was aroused up in Cockerham gardens, Longman row, close to the town; and a Water Hen, was taken in the town, which is yet kept alive. The more scarce Water-Rail has been shot, as also the ash-coloured Shrike or Butcher Bird.--T. Lister, Barnsley, February 1854.

The Retrospect.

The reader will see that my explanation has not been proved unsatisfactory. Mr. S. seems not to comprehend it. One evening, John Newton could not light his candle—*the extinguisher was on.* According to Mr. S., excavation always implies boring. Hens *excavate* holes in gardens, etc.; do they *bore?* No! Neither do Starlings! His attack was unnecessary, as well as frivolous in the extreme. Let him leave such work to those whose Lilliputian intellects are fitted for it, lest he be ranked with them. Let *errors* be pointed out, and they shall be readily corrected. The subject is unworthy of farther notice.--J. Longmuir, Jun., June, 1854.

We trust this controversy, which can benefit no one, may now be allowed to drop.—B. R. M.

In volume iii., page 85, of "The Naturalist," is a communication by W. Macduff, in answer to which I now quote a piece from "De Geer." "In the month of July I found a caterpillar of the Puss Moth, (*Cerura Vinula*,) resting upon a small twig, which I cut in order to enable me to examine it more attentively. As I was scrutinizing its appearance, I happened, accidentally, to touch its body, instantly there shot out, from a spot near the head, two streams of a clear

fluid, which struck me on the face and partly entered one of my eyes, causing a very acute, but, fortunately, not a very enduring, pain. My surprise at this salute prevented my taking particular notice of the place from whence the jets proceeded. It appears probable that this caterpillar has been endowed with this squirting apparatus to enable it to defend itself against its enemies, or, at least, to assist it in frightening, or perhaps, in hunting its prey. For myself, I confess, after the reception I had met with, I felt some degree of fear at nearly approaching it."—L. SHIELDS, Blackheath, February 28th., 1854.

In St. John's "Field Notes and Tour in Sutherland," vol. i., page 208, I find the following passage, which appears to me to account for "the curious conduct of the Hooded Crow," mentioned in the last number of "The Naturalist," by Mr. W. W. Cooper. "Amongst the curious instincts which birds display in providing themselves with food, one, most resembling reason, is that which teaches the Common Crow, on finding on the shore a shell containing fish, to fly with it to a height in the air and then to let it drop, in order to break the shell sufficiently to get at the fish enclosed in it. When the stone (shell?) does not break the first time that the Crow drops it, she darts down, picks it up, and ascends still higher, till she perceives that the height is sufficient for her purpose. Sometimes another Crow darts in to carry off the booty, upon which a battle ensues in the air."—E. J. MEYNELL, Durham, April 5th., 1854.

The Querist.

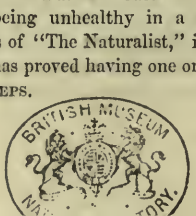
Is Guernsey to be considered, by Naturalists, part of Great Britain.—I have, this morning, noticed a query in "The Naturalist," by the Rev. F. O. Morris, as to whether the Channel Islands are to be "considered Entomologically and Ornithologically, as well as politically, a part of Great Britain." I cannot say what the usage among writers on Birds and Insects may be, but in all manuals of British Botany I have seen, and most of them have passed through my hands, plants from these islands are included. May not the rule which applies to one department of Natural History be with advantage applied to all?—JAMES B. DAVIES, Borage, Ripon, April 3rd., 1854.

I do not for half a moment doubt that the nest found by Mr. Hodge, one of the "Querists" of your February number, was that of the most familiar of our birds, little Robin Redbreast. The position and materials correspond exactly. And, though I believe almost all birds have *white* eggs as an occasional variety, I do not think it is the case so frequently with any other as with the Robin. Some, in my possession, which I took two years ago, from an ivy-covered wall, are pure white, and *very smooth*. As both the Robin and Yellow Hammer vary considerably in the *size* of their eggs, the eggs of the two may often be about the *same* size. I should think the *Wryneck never* builds in this situation.—G. SOWDEN, Curate of Houghton-le-Spring, February 17th., 1854.

Is there not some mode of taking impressions, so to speak, of the wings of Butterflies and Moths, on some kind of paper. Information on the subject will oblige.—F. O. MORRIS, Nunburnholme Rectory, Hayton, York, May 30th., 1854.

G. R. Twinn would feel it a great kindness if any of the Botanical readers of "The Naturalist" would advise a work on British Mosses, suited for the hands and wants of youth about fourteen years of age; by which they might readily become conversant with all the genera they might discover in their rambles and studies. A work with illustrations or specimens, after the manner of Gardiner's, would be preferred; but including all the families. Also a work on British Ferns. —Bawburgh Hill, near Norwich, March 18th., 1854.

I hope you will not consider the following question as out of place in the first convenient number of "The Naturalist," seeing that it is most likely some of its readers may be "City-pent" Fern growers, as well as myself. I have one or two Wardian Cases in my bedroom, and I am remonstrated with for keeping them there, as being unhealthy in a sleeping room. Now I want to ask yourself, or some of the Correspondents of "The Naturalist," if any injurious result is to be apprehended, or if experience, in any case, has proved having one or more Wardian Cases in a bedroom to have an unhealthy tendency.—ANCEPS.



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NOTICES TO CORRESPONDENTS.

Communications have been received, up to July 19th., from J. Braim, Esq.; Mr. T. Edward;—A. Kerr, Esq.;—J. P. Fraser, Esq.;—Mr. M. Westcott;—C. Ashford, Esq.

Contributions have been received, up to July 19th., from T. T.;—W.;—Mr. T. Lister;—R. B. Cooke, Esq.;—Mr. D. Graham;—J. W. Watson, Esq.;—H. Smurthwaite, Esq.;—J. P.;—Mr. J. O. Harper;—C. G. Lenny, Esq.;—R. Mc'Lachlan, Esq.;—C. H. Dashwood, Esq.;—J. Scrymgeour, Esq.;—H. H. Woods, Esq.;—G. Stockby, Esq.;—Mr. T. Edward.

Will T. T. favour us with name in confidence?

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ORNITHOLOGICAL AND ENTOMOLOGICAL NOTES.

Charles Fothergill to William Fothergill, August 16th., 1799.

"As to the Willow Wrens, I think them the most active, and as beautiful as any, of the genus. I also have met with them in woods, but they are more frequent with us in Askam bogs, a large kind of morass, about two miles from York, in which there are many trees though small ones. In the thickest part of this place I observed some small birds very active in climbing up and down trees, and catching insects with great dexterity; I watched them for some time, and then, having my gun with me, I shot two of them at one shot; no sooner had I taken them up than I pronounced them to be *Motacilla Trochilus*, and what was more singular, only two birds being shot, they were of different sizes—the large and middle Willow Wrens were now in my power: I therefore put them in my pocket in order to examine them at leisure. I had not proceeded much further before I again saw some of what I supposed to be the same birds, but smaller; accordingly I shot one, and I found it was really the least of the three Willow Wrens. I was much delighted, in one morning to meet with all these three rare birds, rare at least here. When I reached home I examined "Latham's Synopsis," and "White's Natural History of Selborne," and found them really to be what I had suspected them—the large, middle, and small Willow Wrens."

Charles Fothergill to William Fothergill, January, 1809.

"This winter has not produced anything very uncommon in our vicinity that has come under my notice. A man brought me a very beautiful male Kingfisher which he had killed upon the Foss, behind our castle, during a severe storm. The plumage was little injured, and I have its skin in tolerable preservation. This bird is becoming very scarce with us."

William Fothergill to Charles Fothergill.

Spiders.—"I do not know much about Spiders, though they are certainly very interesting insects. When I made the little summer-house in our garden, it was plastered with the whitest lime I ever saw, and having a large window the room was unusually light. In a very short time some Spiders of a common kind took possession of the corners of the ceiling. In that room there were no holes or cavities in which they could hide themselves; and, what very much surprised me, the Spiders soon became nearly as white as the wall, yet I am very sure it was not from the lime externally adhering to them. How have they the power of assimilating their colour to that of the situation they have chosen, and by that means becoming less conspicuous to their enemies, and less a terror to their prey?"

"There is a sort of Spider not unusual here, which makes its web

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perpendicularly to the stone walls which usually form our fences; their webs are formed of concentric circles, with transverse radii from the centre, where the insect generally stations itself. In very clear weather when the sun shines upon the walls, the web is very conspicuous, and easily avoided by the flies. To obviate this inconvenience the Spider retires from the centre to a crevice in the wall, where some of the transverse radii are fastened, and by its foot, or, perhaps properly, hands, gives the whole web a rapid jerking motion, which renders it, for the time, perfectly invisible. This motion is long continued, with only short intervals, and I think is evidently the result of design and contrivance the more certainly to ensnare and secure its prey. This may probably have been noticed by authors, but having read very little on the subject, I am not aware whether or not it is generally known."

Since sending the notice from my father's papers, of the method practised by some Spiders in order to render their webs invisible, I have met with the following, which I think may refer to a different species of Spider, that renders not only the web but itself invisible, by the communication of a rapid vibratory motion; and I observe the term hands is used, as my father suggests it probably should be, instead of feet. This species is found amongst furze bushes, and operates from the centre of the web, whilst my father's were found on the sunny side of stone fences, and performed the vibrations from the periphery of the web. I thought that it might be interesting if this account was placed in juxtaposition with my father's, though I am not aware to what extent, or how long, the facts may have been known to Naturalists. The extract is from a recent work, entitled "My schools and schoolmasters, etc.," By Hugh Miller.—John Fothergill, M. R. C. S.

"The large Diadem Spider, which spins so strong a web, that, in pressing my way through the furze thickets, I could hear its white silken cords crack as they yielded before me, and which I found skilled, like an ancient magician, in the strange art of rendering itself invisible in the clearest light, was an especial favourite; though its great size, and the wild stories I have read about the bite of its congener the Tarantula, made me cultivate its acquaintance somewhat at a distance. Often, however, I have stood beside its large web, when the creature occupied its place in the centre, and touching it with a withered grass stalk, I have seen it suddenly swing on the lines "with its hands," and then shake them with a motion so rapid, that, like Carathus, the mother of the Caliph Vatheck, who, when her hour of doom came, 'glanced off in a rapid whirl, which rendered her invisible,' the eye failed to see either web or insect for minutes together. Nothing appeals more powerfully to the youthful fancy than those coats, rings, and amulets of eastern lore, that conferred on their possessors the gift of invisibility, and I deemed it a great matter to have discovered for myself, in living nature, a creature actually possessed of an amulet of this kind, that, when danger threatened, could rush into invisibility."

LOCAL JOTTINGS.—No. 13.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

White Jackdaw, (Corvus monedula.)—In my first Jotting I mentioned briefly a very curious specimen of this bird in the possession of Mr. Pulman, of this town, and I have the pleasure of stating that the same bird is now 'in esse,' and in perfect health. It is a male, of beautiful plumage, perfectly white, and a good talker. He is now just over three years old. This bird was hatched in the belfry of St. Peter's Tower, Dorchester; and, singular to say, the next year, that is, two years since, a nest of two was taken by the sexton, also in the belfry,—one Daw, black as usual, and the other perfectly white. These two birds were sent to the Rector of the parish, and by him given to a gentleman of Maiden Bradley, who brought them up till a few weeks since, when unfortunately the white one died, it is supposed from being beaten by the other. Mr. Pulman would, I feel assured, be happy to show his bird to any person wishing to see such a curious freak of Nature.

Newly-described Trade.—I observed at Charmouth, in this county, one day, *en passant,* the following newly-described Trade on a sign:—

"JOHN HUNTER,
FOSSILER.
N. B.—Pleasure Boats for hire."

Charmouth is famed for its Blue Lias, Pyrites, Minerals, and Fossils.

Painted Lady Butterfly, (Vanessa cardui.)—I have already mentioned the scarcity of Butterflies in this neighbourhood this year, but I never saw so many of the above at one time as last year. I had been bathing at Blackwater, near this town, and on my return in the common meadow, by a brook, I saw at least forty or fifty of these large and elegant Butterflies disporting themselves on the flowers of some loftily-grown plants of the Meadow Sweet, (*Spiræa ulmaria.*) Having no net, I was not then able to take any, although I and my little boy, who was with me, endeavoured for some time to do so. This was about two o'clock, p. m. We returned home for a net, and were down again in the meadow before three; but although the place is open, and we looked everywhere we could think of, not one could be seen, nor could we imagine whither they had departed. I always notice this Butterfly appears "by fits and starts," and some seasons very plentifully.

Delicacy of the Horse, (Equus caballus.)—Although many cases are on record evidencing the extreme delicacy and timidity of the Horse, I do not remember seeing an instance exactly similar to the anecdote, showing the effect of fear on that animal, which just occurs to me. Some time since, Wombwell's Menagerie happened to be located in a neighbouring town, and they had purchased some straw from a farmer living near, for the use of the wild

beasts. This straw, which was only slightly affected or injured by one night's use, the Proprietors sold the next day to an innkeeper in the place. On the straw being applied for the purpose of bedding his horses, they refused to lie on it,—snorted and started as if mad or frightened, and nothing would induce them to lie down. This occurred several nights, and the straw was ultimately destroyed without any use having been made of it. The sense of smell in the Horse must be very acute, for this happened some time after any odour could be perceived by the ostler and others.

The Horse.—I do not know whether it has been observed that the skin of all "Skewball" Horses is of a white and delicate pink colour under the hair; whilst that of all others, "Pieballs" as well, is dark.

Dorchester, May, 1854.

GLEANINGS BY THE WAY.

BY JOHN ROSE, ESQ., M. A., F. B. S., M. D. R. N.

The Chimney Swallow, (*Hirundo rustica,*) I first observed on the 8th. of April, the same day as last year, a coincidence in itself trifling, yet worth noting, and interesting to those who, like the Rev. Gilbert White, and other naturalists of later date delight in contributing to the formation of a calendar of nature. This register can only be made accurate by observations extending over a series of years in different localities: and all, however humble their sphere, may add their mite. The Rev. L. Jenyns remarks that "a calendar of periodic phenomena in Natural History may be constructed for other purposes than those immediately connected with that particular science. Observations of such phenomena may be combined with others in meteorology, and tend to enlarge our knowledge of particular climates. Or, without being so combined, they may serve of themselves to point out many climatological considerations, of the greatest importance in certain branches of human industry, dependent upon the differences which one climate exhibits compared with another. This results from the close connection which subsists between the phenomena of climate, and the phenomena of the animal and vegetable worlds. It becomes therefore a most interesting study, and almost forms a science in itself, to trace out this connection, and to observe the periodic time, as well as the simultaniety, whenever it occurs of all the resulting phenomena considered relatively with each other."

On the 21st. of April, near Grange Farm, almost opposite Osborne House, I heard the Nightingale, and listened with delight to its notes of harmony mocking as they do the reach of art.

On the 25th. of April I saw a pair of Turtle Doves near Lord Ashburton's marine residence: and on the same day a fine specimen of that handsome, and, in this country, rare bird, the Hoopoe, (*Upupa epops,*) was shot by Mr. William Leane, of Privet Farm, near Gosport. "The most unusual

birds I ever observed in these parts were a pair of Hoopoes, which came several years ago in summer, and frequented an ornamented piece of ground, which joins to my garden, for some weeks. They used to march about in a stately manner, feeding in the walks many times a day, and seemed disposed to breed, but were frightened and persecuted by idle boys, who would never let them be at rest. Colonel Montagu mentions a pair that began a nest in Hampshire, and Dr. Latham records a young Hoopoe shot in the month of June. One specimen was shot in the county of Dublin, and another in the county of Tipperary, in 1828. The species is abundantly met with in the south of Europe; it also occurs in Holland, Germany, Denmark, and Sweden. In the winter it retires to Asia and Africa, where it is also a permanent resident."* Two notices of this bird occurred in "The Naturalist" last year, in one of which the nest is said to have been discovered.

On the 29th. of April, I first heard the Cuckoo, (*Cuculus canorus*,) and who has not experienced a thrill of delight when its well-known sound first falls on the ear in spring.—

"Hail beauteous stranger of the wood,
Attendant on the spring!
Now heaven repairs thy rural seat,
And woods thy welcome sing.

Soon as the daisy decks the green,
Thy certain voice we hear;
Hast thou a star to guide thy path
Or mark the rolling year?

Delightful visitant! with thee
I hail the time of flowers,
When heaven is filled with music sweet,
Of birds among the bowers.

The school-boy wandering in the wood,
To pull the flowers so gay,
Starts thy curious voice to hear,
And imitates thy lay."

During the month of April a profusion of wild flowers appeared in this quarter, many of them much earlier than usual. The fields were unusually bright and perfumed with the yellow flowers of the furze, (*Ulex Europœus*,) "unheeded by those who can delight only in the flower brought from afar, it is ever an object of admiration to the lover of simple beauty. Linnæus fell on his knees, and thanked God for its loveliness, when first he beheld it. Among the plants of his native land, he knew not one which could equal it; and he attempted in vain to introduce it into Sweden."†

By thinking of these and other objects of nature, our rural rambles become full of enjoyment and interest. "Few of us, perhaps in reviewing our by-gone days, could the hours return again, but would wish many of them differently disposed of, and more profitably employed: but I gratefully say that portion of my own passed in the contemplation of the works of nature, is the part which I most approve—which has been most conducive to my happiness; and perhaps, from the sensations excited by the wisdom and benevolence perceived, not wholly unprofitable to a final state; and which might be passed again, could I but obtain a clearer comprehension of the ways of infinite wisdom. If in my profound ignorance I received such gratification and pleasure, what would have been my enjoyment and satisfaction 'if the secrets of the Most

* "White's Selborne." † "Wild Flowers of the Year."

High had been with me, and when by His light I had walked through darkness?' "*

"Oh good beyond compare!
If thus thy meaner works are fair,
If thus thy bounties gild the span
Of ruined earth and sinful man,
How glorious must that mansion be
Where Thy redeemed shall live with Thee!"

OCCASIONAL NOTES.

BY MR. MICHAEL WESTCOTT.

A Common Rat in Trouble.—A few days since, as Mr. James, Butcher, was in his slaughter-house, he heard a strange noise issuing from a small hole close by, which communicates with the common sewer. The cries, which resembled the shrieks of a child, at last became so loud and frequent, that they brought several people to the spot, who were standing at the back door of the "King's Arms," a distance of fifteen yards at least. In the midst of their bewilderment, they observed a round tile, which covers the small hole, fly up as if by magic, and at the same time a huge Rat made his appearance crying bitterly. He was quickly followed by an "infuriated mob" of his own species, which was making a dismal clamour, and at the same time, no doubt, breathing vengeance on the head of the object of its rancour. However, the pursuers were prevented from putting their murderous designs into execution, by the tile falling down over the hole just as two of them came up. When they found themselves trapped, they showed no signs of combativeness towards the runaway, but rather endeavoured to make a speedy retreat; that, neither of them could accomplish, as there was a moveable grate over the aperture, and consequently they shared the same fate as many larger quadrupeds do in that slaughter house in the course of the year. The fugitive Rat measured twenty-two inches long, including the tail, and weighed two pounds one ounce. No wonder the others brought all their force to bear upon the monstrous intruder.

The Painted Lady Butterfly, (Cynthia Cardui.)—I did not see a single specimen of this charming insect last season, nor did I observe more than three solitary Red Admirals, (*Vanessa Atalanta;*) their scarcity must be owing, in a great measure, to the excessive wet weather which we experienced in the summer, as both the species were plentiful the previous year. The Peacock's eye, (*Vanessa Io,*) was more abundant, but I bred many more than I saw.

A Canary in a Trance.—Mr. John Marks, 21, Bounday Road, St. John's Wood, London, communicated to me the following anecdote:—When he was a boy he kept one of those "little household pets" for nine years, and it was,

* "Journal of a Naturalist."

as may be supposed, a great favourite with the family. On taking down the cage one morning to replenish the little occupant's food, Mr. Marks observed his "pet" lying motionless at the bottom. He took it out, examined it, and it was to all appearance dead; the sad event was quickly known among the household, who handed the defunct body one to another, but no one entertained any hopes of ever hearing its thrilling notes again. The bird was placed on the chimney-piece in the parlour, where it remained for three days; during which period it received many a fond caress and minute inspection. On the fourth day the servant went into the "chamber of death," when, lo! a transformation had taken place; for instead of poor "Dick" being quietly lying on his bier, he was actually *flying about the room*. The mourners were quickly summoned to bear witness to the happy change; their joy may be well imagined, on seeing their little pet, which they deplored as dead, assume again its living state, and perform the many pleasing tricks it was wont to do. However he did not live more than about three months after the above event, and did not sing as loud and frequently as before. There could have been no deception practiced in the above affair, as the bird possessed some unmistakeable traits in his character, together with a peculiarly marked plumage, to allow of any fraud being played.

SUPERIOR INSTINCT IN A WAGTAIL, (*MOTACILLA LOTOR.*)

BY GEORGE R. TWINN, ESQ.

It is a law that must have struck every earnest student of Nature, that a system of counterbalancing agencies is always at work:—every event has its opposite; every good its evil. It is very wisely arranged by Providence, that no one created thing shall exclusively lay claim to a possession of all the qualities, gifts, peculiarities, and endowments that are characteristic of separate individuals, or even of families and classes. This is illustrated in the Elephant, with its stupendous body, but very short legs; in the fleet Stag, but with its impeding antlers, for passage through the thicket; in the Snake, with its offensive odour, when grasped, to secure thereby its liberty; and in the elongated neck of many a bird, but with a body comparatively small. This law, if carefully observed, and the mind well directed to it in very close thought, inevitably leads to the result of a very great admiration of Him, who is thus seen to have furnished each family of his vast dominion, with what is appropriate for its very wise destination and place in the earth.

There are many who take no heed of the common things around them. Oh, how much they are to be pitied! Were they but to notice the tact of the Hare, with its short, though elastic legs, doubling and re-doubling to elude the long vaulting members of the pursuing hound; they would at once perceive this dual law of compensation. But there are some who claim for man, that he, by his position and gift of reason, has full advantages over the beasts and birds: that he is an exception to this rule of counterbalancing agencies.

It is a good thing this class is rapidly diminishing. Has not superior civilization brought in more weakness and effeminacy? I do not desire in any way to confound learning with civilization, for that gendereth strength.

Now some few years ago, a party of young men, on a hazy afternoon, went down the River Crouch, near Foulness Island, Essex, to look after a stranded vessel: they were out some hours, and had provided pipes and refreshment. The mist suddenly appearing to be much denser, they, for their safety, stoutly pulled away to reach home. They were quite unable, from the denseness of the atmosphere, to say whereabouts they were, but they all concluded they were nearly two miles from home. The tide began to rise, and they now found themselves rapidly riding onwards; unexpectedly one of the party cried out, "see! here's a little bird in the boat!" and there tamely and busily feeding on the crumbs at the bottom of the boat, (the fragments of their biscuits, etc.,) was a little Wagtail. None knew when it entered, or how they became possessed of such a companion; but what pleased them, was its not taking any alarm at them, but gladly allowed itself to be captured. It was certainly very damp, as though it had traversed some distance in the fog, and had been exhausted with its flight, and therefore glad to avail itself of the refuge found.

They marked the time by their watches, and it tarried with them nearly twenty minutes, hopping very contentedly about the boat; but on a sudden it was off on a strong refreshed wing, and the party, astonished, deplored its departure. About five minutes after its flight, one of the young crew said "hark! there's old Squire R's rooks!! and, sure enough, it was a true utterance: they knew at once their situation, and soon were in safety. Now the point of the anecdote rests here with me, *the very early discovery* of land and trees by the *acute senses* of the Wagtail; so readily perceived, and its native haunts at once regained. The *great keenness* of the bird's *vision;* its *ready perception* of its *natural locations,* certainly rank far above those of man; and teach us, that, though knowledge, an artificial acquirement, dependent on great pains and instruction, may distinguish man from his "living associates" that lack reason; yet that God hath given to the lower orders of life, gifts and capacities that man can never possess, nor deprive them of; save by defrauding them of their birth-right liberty.

Let me just add in conclusion, that the Hyæna is a fine illustration of a superior sense and discernment *of water in the desert,* characterizing him before his master, lordly man.

Even this last winter, during the snow, the Wagtail, with the Robins, was a constant visitor for the lavish crumbs we every meal reserved for them. I hope this illustration of the law of compensation, or rather proof that God provideth well for the fowls of the air, according to their respective necessities, is very beautifully exemplified in what I have detailed.

I would merely add that I received this account of the Wagtail, from one of the inmates of the boat.

Bawburgh, near Norwich, April 10th., 1854.

LAND AND FRESH-WATER MOLLUSKS FOUND DURING A FEW WEEKS RESIDENCE IN CHELTENHAM AND THE VICINITY.

BY W. WEBSTER, ESQ.

The Nomenclature is that of Gray's "Turton."—

Neritina Fluviatilis.—Tolerably abundant, though generally much eroded, in the streams near canal at Chalford, on the Cheltenham and Great Western Railway.

Paludina achatina.—Abundant in canal in the same locality.

Bithinia tentaculata.—Very common in all the streams I had an opportunity of trying.

Valvata Piscinalis.—In canal at Chalford.

Valvata cristata.—Scarce at the same place.

Arion ater.—Common in damp situations; of many shades of colour—some beautifully marked with orange round the edges of the foot.

Arion hortensis.—Very common in similar localities.

Limax arboreus.—Very abundant in beech woods, especially in early spring and autumn, crawling on the smooth bark of the trees in moist weather, and hibernating amongst the dead leaves.

Limax maximus.—A few specimens, but the season was too dry for them to shew themselves in any numbers.

Limax agrestis.—Everywhere very plentiful and very large.

Vitrina pellucida.—Common in its usual haunts.

Helix aspersa.—Very numerous and large. At Birdlip, six miles from Cheltenham, I found one specimen of the white, or rather yellowish variety, without any bands or marks whatever.

Helix hortensis.—Very numerous: several of the beautiful variety with colourless or transparent bands.

Helix nemoralis.—Very fine and beautifully-banded varieties. Three specimens, which I can only refer to this species, of a clear and beautiful *milk white;* one with a roseate lip, one with a white lip like *Hortensis,* but with the usual brown colour of *nemoralis* in the base of the body; the other, an immature specimen, but with the brown mark beginning to make its appearance.

Helix Pomatia.—Found of a large size in several woods in the neighbourhood—Lineover, Witcomb wood, and Cooper's Hill, near Birdlip, etc.

Helix arbustorum.—Some pretty varieties.

Helix Lapicida.—Many on the Limestone rocks, but more frequent still on the stems of beech trees in nearly all the woods around.

Helix pulchella.—A few specimens in damp situations.

Helix pulchella, (*v.* costata?)—Is it not a distinct species? most abundant at Minching Hampton, on the driest walls I ever met with, amongst *Sedum acre,* but not so fine as I have found them near Liverpool, in damp places. The two varieties here appear quite to have changed haunts.

Helix fusca.—Dead but very fine specimens in Witcomb wood and at Longford, near Minching Hampton.

Helix fulva.—Amongst damp leaves: not unfrequent.

Helix aculeata.—Occasionally met with in company with the former.

Helix granulata.—In springy spots in the valleys round Stroud and Minching Hampton.

Helix hispida.—To be found in any quantities at Brimpsfield Castle, near Birdlip; and tolerably numerous in other localities.

Helix concinna.—Generally diffused.

Helix rufescens.—Of every size and shade of colour, and in every variety of locality.

Helix virgata.—Very numerous on the short grass of the downs, but most commonly small, though well marked.

Helix caperata.—Not unfrequent, but rather local.

Helix ericetorum.—Very numerous with *virgata;* exceedingly variable in size: a few specimens of the variety *obliterata.*

Zonites rotundatus.—Common: one very fine specimen of the crystalline variety; I may mention that I had previously found this variety at Kenilworth Castle, and at Upton, near Birkenhead.

Zonites umbilicatus.—In myriads under the small loose stones of the dry stone walls in elevated districts; I have traced them for twenty miles on what may be almost called an unbroken chain of wall, and they appear to extend across the country in every direction.

Zonites pygmæus.—On dead and damp leaves at Birdlip, etc.

Zonites alliarius.—An occasional specimen under a stone or in moss.

Zonites cellarius.—Common and fine.

Zonites purus.—Very fine specimens amongst damp leaves at Birdlip, Down Wood, etc.

Zonites nitidulus.—Some very fine specimens.

Zonites radiatulus.—Rather scarce.

Zonites lucidus.—On the brink of the canal at Chalford: a few specimens.

Zonites crystallinus.—Very common amongst damp moss and leaves.

Succinea putris.—Common.

Succinea Pfeifferi.—Common.

Bulimus Lackmanensis.—On the stems of beech trees at Birdlip, Cooper's Hill, Lineover, and Chalford during summer; in winter amongst the dead leaves and moss at their roots. As far as I am yet able to judge, this fine *Bulimus* appears to be confined to the chalk and limestone formations.

Bulimus obscurus.—Common on rocks and beech trees.

Zua lubrica.—Tolerably frequent in damp spots.

Azeca tridens.—Local but not unfrequent. They appear to congregate in little family parties, for if you find one, you may be pretty sure of finding half a dozen others within a few inches.

Achatina acicula.—One dead specimen on Minching Hampton Common.

Pupa umbilicata.—By no means numerous.

Pupa marginata.—Generally diffused in small numbers amongst short grass on the downs; but at Minching Hampton on the top of walls in *Sedum acre*, in company with *H. costata* in the greatest profusion, and most specimens very fine.

Pupa Juniperi.—Very abundant at the foot of walls and under stones; one crystalline specimen, but smaller than the usual variety.

Vertigo edentula.—A few specimens under leaves generally in damp and boggy situations.

Vertigo pygmæa.—Amongst the short grass on the Common at Minching Hampton, etc.

Vertigo palustris.—In a damp spot on the same common.

Balæa perversa.—Not uncommon on trunks of trees and old walls.

Clausilia bidens.—Very numerous and fine on the stems of beech trees, in hedge-rows, etc. I found several specimens of a beautiful hyaline variety at Cooper's Hill and Cranham Wood, adjoining.

Clausilia Rolphii.—Several colonies of this very local and rather scarce *clausilia*, extending from Birdlip to Cooper's Hill. This appears to me a completely new locality, never having heard of its being found so far north before; the principal number I found amongst patches of *Saxifraga oppositifolia*, in company with *Axeca tridens*, and not unfrequently six or eight in a cluster at the roots of a tuft of grass growing amongst the *Saxifraga*, which was in a damp situation; but it must be borne in mind, that they were still enjoying their winter sleep; perhaps when the weather became more genial, they might be more scattered.

Clausilia nigricans.—Also its variety, very common.

Carychium minimum.—Numerous.

Acme fusca.—One dead specimen at Birdlip.

Limnæus auricularis.—Common and rather fine in canal at Chalford.

Limnæus peregeri.—Several varieties in canal and in neighbouring ditches.

Limnæus stagnalis.—A few specimens in same canal.

Limnæus palustris.—A few specimens in same canal.

Limnæus truncatulus.—A few specimens in same canal, and in ditches.

Ancylus fluviatilis.—A few on stones and shells, at Chalford.

Physa fontinalis.—One or two fine specimens at Chalford.

Planorbis corneus.—Numerous in some of the reaches of the same canal.

Planorbis albus.—A few in same place.

Planorbis carinatus.—A few in same place.

Planorbis marginatus.—A few in same place.

Planorbis vortex.—In ditches near Cheltenham.

Planorbis spirorbis.—In ditches near Cheltenham.

Planorbis contortus.—Canal at Chalford.

Cyclus Rivicola.—Canal at Chalford.

Cyclus cornea.—Canal at Chalford.

Pisidium Henslowianum.—One specimen, canal at Chalford.

Pisidium amnicum.—Not unfrequent in same locality.

Pisidium cinereum?—Springeye on Minching Hampton Common, and one or two of the smaller varieties, which I have not yet been able to make out.

Anodon.—Several young specimens; but I had no opportunity of dredging, to find out to what variety they belonged.

Dreissena polymorpha.—Canal at Chalford.

Upton Hall, Birkenhead. May 1st., 1854.

LIST OF LAND AND FRESH-WATER MOLLUSKS FOUND IN THE NEIGHBOURHOOD OF ACKWORTH,* YORKSHIRE.

BY CHARLES ASHFORD, ESQ.

Nomenclature, Gray's Turton's British Shells.

Bithinia tentaculata.—Abundant: invariably covered with an earthy incrustation.

Valvata piscinalis.—Abundant at Winterset, (five miles S. W.:) common here.

Arion ater.—Common: of several shades between black and russet brown.

Limax maximus.—Common, but generally not so large as I have seen them in other districts.

Limax carinatus.—Several specimens once found on a stone wall after a wet day.

Limax agrestis.—Superabundant.

Vitrina pellucida.—Of frequent occurrence in early spring, at bottom of hedges among wet leaves, etc.

Helix aspersa.—As everywhere, common and voracious.

Helix hortensis.—Occasionally found here.

Helix hybrida.—Rare; one good specimen found a few days ago.

Helix nemoralis.—Common. One specimen was found marked with rich irregular mahogany-like blotches instead of bands.

Helix lapicida.—Tolerably abundant among the fissures of the limestone rocks at Went Vale.

Helix pulchella.—Pretty common. Specimens of *v.* Imbricata have been found in dry as well as marshy situations. (See Turton, p. 142.)

Helix Cantiana.—Common but local, being confined to a few hundred yards of hedging.

Helix fusca.—Not found nearer than the woods by Doncaster, and can hardly be said to belong to this neighbourhood.

Helix fulva.—Tolerably common at roots of grass in damp situations.

* Ackworth is situated on the borders of the Sandstone of the coal measures, with the Magnesian Limestone and New Red Sandstone within two or three miles.

Helix aculeata.—Common among damp vegetable matter at hedge bottoms.

Helix granulata.—Found in a small copse some years since, but not lately.

Helix scricea.—Two or three specimens were found last year by W. Robinson, of York.

Helix hispida.—Common among loose stones, etc.

Helix concinna.—Abundant.

Helix depilata.—One or two supposed specimens.

Helix rufescens.—Common on a hedge bank near Wakefield. I have all shades, from light horn to bright brown.

Helix virgata.—Abundant among the herbage near the Pontefract Railway Station, but comparatively small in size.

Helix caperata.—Not common.

Helix ericetorum.—Common at Went Vale on limestone herbage.

Zonites rotundatus.—Abundant under stones.

Zonites pygmæus.—Pretty common at root of damp or peaty grass.

Zonites alliarius.—Occasionally beneath stones. Strongly garlic scented, especially when excited.

Zonites cellarius.—Common in its usual haunts.

Zonites purus.—Common among decayed leaves at hedge bottoms, and in woods.

Zonites crystallinus.—Common among decayed leaves at hedge bottoms, and in woods.

Zonites nitidulus.—Very common under stones, etc.

Zonites radiatulus.—Occasionally found at roots of grass in damp pastures.

Zonites lucidus.—This beautiful shell occurs in unusual abundance among the stranded flags and equiseta of Hemsworth Dam. The larger specimens seem to be more or less corroded at the apex.

Zonites excavatus.—Three specimens of this animal were unexpectedly obtained last year from an old loose tree stump in the wood at Winterset.

Succinia putris.—Occasional, but not by any means so abundant as Succinia Pfeifferi, which, though small, swarms in same locality as *Z. lucidus*.

Bulimus obscurus.—Not common: perhaps overlooked from its power of concealment.

Zua lubrica.—Very common at roots of grass, etc.

Achatina acicula.—Several specimens of this shell from the limestone at Went Vale, but only two or three inhabited.

Pupa umbilicata.—Common.

Pupa marginata.—A few dead but good specimens from the moist earth of same locality as *Achatina acicula*.

Vertigo.—Some of these beautiful little shells have been obtained from the Magnesian limestone crags at Went Vale, chiefly among the debris that has collected by the side of the rocks, and become mixed with the vegetable mould and decayed leaves below. By filling a botanical case with this earth, and examining it at leisure, I have procured at one forage above one hundred

and sixty specimens of *pusilla*, (not many alive but the shells in good condition,) some thirty or so of *pygmæa*, and about fifty of *edentula*, besides two or three *substriata and cylindrica*, and many commoner shells.

Vertigo palustris.—A few dozen specimens from the wet grass on the banks of Hemsworth Dam.

Clausilia nigricans.—Common in the woods among moss on trees, etc.

Carychium minimum.—Common in the woods at roots of mossy grass.

Limnæus auricularis.—Not uncommon at Hemsworth and Winterset.

Limnæus pereger and its variety *lineatus*.—Common—varieties *acutus* and *lacustris*.—Not common.

Limnæus palustris.—A few specimens from small field pools.

Limnæus truncatulus.—Abundant in grassy ditches.

Limnæus glaber.—Abundant in one meadow pool, confined to a few square yards. The peculiarity giving rise to variety *lineatus* in the *pereger* I have observed in all the species of this genus.

Ancylus fluviatilis.—Not uncommon.

Velletia lacustris.—Pretty common in one small pond, adhering to grass, etc.

Physa fontinalis.—Abundant in mill pond.

Aplexus hypnorum.—Not common.

Planorbis albus.—Good specimens from Hemsworth Dam.

Planorbis lævis.—Abundant in one small depopulated fish pond; adhering to *Potomogæton crispus*. Some strange monstrosities.

Planorbis imbricatus.—Not common: found with v. *lacustris*.

Planorbis carinatus.—A few specimens.

Planorbis marginatus.—Common.

Planorbis vortex.—Common in stagnant pools.

Planorbis spirorbis.—Common in stagnant pools.

Planorbis nitidus.—This well-named species was common in an old fish pond among duckweed a year or two ago, then nearly disappeared, but has again increased.

Cyclas cornea.—Abundant but small.

Cyclas lacustris.—Three specimens obtained last year from a stagnant pond.

Pisidium nitidum.—Common in one small pool.

Pisidium Henslowianum.—Three specimens hitherto.

Pisidium amnicum.—Pretty common in running streams.

Pisidium cinerium?—This and *pulchellum*, I am not satisfied about; we find here abundantly in one locality a species we can refer only to *cinerium*.

Anodon cygneus.—Carted for manure from Nostall: I cannot speak to the varieties; there appear to be puzzling connected links among them.

Unio pictorum.—Considerable numbers in the Went, near and in Went Vale.

Unio tumidus.—In same locality, but not so common as the last.

Dreissena polymorpha.—In the feeding canal from Winterset reservoir: attached in masses to stones as usual, but almost every specimen corroded by the water.

Flounders Institute, Ackworth, Pontefract, January 27th., 1854.

NOTES ON THE ANT OF SCRIPTURE.

BY J. LONGMUIR, ESQ., JUN.

THERE is an extensive authorship connected with many of the animals, and most of the plants of Scripture. Perhaps more has been written on the subject of the following notes than on most of its associates whose names are recorded, or whose customs are alluded to in the Bible. If all the pages that have appeared in times long gone by, or but a month ago, were collected, that bear on the matter to be brought under consideration, a minature library of the most diversified pamphlets—diversified as to style, language, matter, and size would be the speedy result. The cumbrous pages of a Bochart would contrast strangely with the few, but, to speak comparatively, common-sense notes of Thaddeus (not Moses) Harris, the ingenious argumentations of a writer in the "Biblical Cyclopædia," with the few but well chosen, as well as facetious statements of the author of the "Episodes of Insect Life," and the diffident opinion of a Kirby with Addison's elegant rendering of a letter addressed to the French Academy.

Notwithstanding all these laborious researches, minute investigations, and interesting experiments, the difficulties connected with the subject have not been cleared away. The learned writings of the scholar and the studies of the Naturalist, have but served "to make the darkness visible." These men found the Bible-student at the foot of a lengthy flight of stairs, and managed with great labour on *their* part, and no little difficulty on *his*, to get him to commence the ascent. They were unable to bring him farther on his way than a landing-place, midway between the starting point and the top; at best it was but a dark landing-place; and so he could not go farther without lights. He has had a dreary stand of it, and there is beginning to be more of despair than of hope in his mind; he seems also much afraid that the promised light will never come, and is at times tempted to escape from the drear darkness by an expedient hinted to him by Kirby, Kitto, and others. Yet he his bold enough to think these counsels too good to be true, and so, in the spirit of honesty, finally rejects them. It is our intention in the following remarks, to explain to the inexperienced reader, who may not have made the subject a matter of examination, the position in which he, the Bible student, has been left, and to bring a light sufficient we trust to enlighten his gloomy station as well as to assist him in reaching the top.

To begin at the beginning then. The "Royal Preacher," in adducing the Ant as an example worthy of consideration to the sluggard and the idler, says of it,—"which, having no guide, overseer, or ruler, provideth her meat in the summer, and gathereth her food in the harvest." What may be drawn from this? Although it is true that Solomon does not say directly that the Ant lays up grain for winter provision, or that it lays up grain at all, who will not at once admit that there is every reason from the words just quoted for the opinion that the Ant lays up in its subterranean magazine a store

of provisions for winter use? And such is the prevailing opinion. In the paraphrase of this very passage, for example, which is used by the church of Scotland, we read as follows—

"Yet see with what incessant cares,
She for the winter's storm prepares;
In summer she provides her meat,
And winter finds her store complete."

The opinion has been long prevalent, and is still held by many. We have said that the opinion that the "provident Emmet" has a magazine of winter provisions—a miniature granary, has been long prevalent, and it may not be altogether uninteresting to shew briefly that this is the case. The jocose Horace in the palmy days of Imperial Rome, speaking of the Ant in one of his satires, says, when dressed in a garb of English,—

"For thus the little ant (to human lore
No mean example) forms her frugal store,
Gathered with mighty toil on every side,
Nor ignorant, nor careless to provide
For future want; yet when the stars appear
That darkly sadden the declining year,
No more she comes abroad, but wisely lives
On the fair stores industrious summer gives."

In these lines he no doubt gives expression to the opinion prevalent among his countrymen, at that time in regard to the social economy of the Formic tribes that are widely spread throughout the length and breadth of sunny Italy. And so sang also Virgil as well as Ovid. The prose writers too have similar passages scattered through their works. Milton also, if we remember aright, uses similar language in his "Paradise Lost," and it has been steadily adhered to for many generations. And whence arose this long-established opinion? From the circumstance that Ants have been frequently observed carrying what seemed grains of corn to their nests,* and bringing them up again when damp to dry in the sun. These *grains* however, on a more close inspection, have proved to be their own eggs. Such then is most probably the origin of the opinion above mentioned; but nearly connected with this, is another one which will be seen in the following passage from Pliny, as rendered into English by that worthy "Doctor of Physicke, Philemon Holland:"—"The Ants are not without care and forecast; look what seeds or grains they lay up for provision; sure they will be to gnaw it first, for fear they should sprout, and take root again, and so grow out of the earth." This passage, as will be seen, asserts not only that the Ant lays up winter provisions for home consumption, but also that it bites out the germ of the corn to prevent it from sprouting. Now Ants, though certainly very clever, and possessed of a remarkable amount of instinct, never did

* Let it be understood that we do not intend considering whether or not Ants eat corn, carry corn, or employ corn in any way; this would occupy more space than we have—we merely examine—whether any ant is a *winter*-store gatherer.

that, notwithstanding all the assurances we have to the contrary from an immense multitude of Jewish, Greek, Roman, Arabian, and even English Naturalists and Authors. Whence arose this second mistake? with great probability, it may be replied, "from the Ant's being observed to open the cuticle of the chrysalis to let out the inclosed insect,"—to bite off the end of the temporary coffin in which the young Ant lies.

Such is the answer to the two long-received and deep-rooted opinions, which have been given by some writers. It would appear then from such statements as those now made, that no just ground exists for the current belief, which seems to receive another and still more decisive blow from the fact, that repeated observations of many different species of the Ant tribe (*Formicidæ*,) have failed to confirm the general belief, and minute examination has proved that, of the multitude of Ants with which Entomologists have become acquainted in various parts of the world, not one species stores up its food in the way supposed.

Still it was found that some explanation of Solomon's language was required. And the way in which the difficulty was surmounted was this:—The majority of writers on the subject, coincided in a great measure with the opinion expressed in Kirby and Spence's Entomology, that the commonly received interpretation of the Ant's storing up food had been "fathered upon the words of Solomon rather than fairly deduced from them." They farther argued that as it has been ascertained "beyond a doubt that *no* European Ants, hitherto properly examined, feed on corn or any other kind of grain" and that as "no species of Ant has been found with food of *any kind* laid up in its nest" it is highly probable that the habits of foreign Ants, and especially of the Formicans of Palestine are in this respect similar.

And besides this argument from analogy they proceed to offer one or two others, very plausible and to many people quite convincing. They are such as the following:—Exotic Ants, as the Termites or White Ants are carnivorous; their carnivorous propensities having been fully tested on innumerable occasions, an Italian Missionary for example bearing witness that while at Congo, he was informed that a cow in her stall has been known to be devoured by them. Many other instances, well authenticated, have been given by various travellers; the reader who wishes to see them may consult the "Penny Cyclopædia" and the "Encyclopædia Britannica;" other species subsist entirely on the saccharine exudations which are given forth in such abundance by many trees; while every one knows that Ants, foreign and domestic, have what have been termed their *milch kine*, the aphides or plant-lice which every one has seen with sorrow covering the buds of a favourite rose, or swarming on the leaves of a fine geranium, from whose bodies they extract, by a remarkable instinct, the sweet juices with which they are distended. The Rev. J. F. Denham, in the "Biblical Cyclopædia," urges another strong presumptive argument to this effect:—The Ants in this country grow torpid in winter, and consequently require no magazine of provisions, but their relations in the

Holy Land have to endure a degree of cold quite as severe as ever occurs in Great Britain, therefore, concludes the writer just mentioned, "Is it not highly probable that the Ants of Palestine, at such times become torpid and need no magazine of provisions?"

But let us see what all this comes to. The reader who feels interested in our subject, must excuse our necessary brevity; and the reader who cares nothing about the matter will no doubt feel very thankful that we intend being short.

We must either hold with one party that Solomon makes a reference, although not directly, yet very clearly, to the Ants storing up corn for winter use; or we must join the opposite party in affirming that Solomon's words have not been properly interpreted, and that they do not in any way sanction the popular and very prevalent notion. Then, let the consequences that follow be strictly marked. If we adhere to the former supposition, the investigations of our most learned naturalists lead to the conclusion that Solomon is wrong! Some (as Dr. Kitto, in a very interesting work recently published—his "Daily Bible Illustrations") give utterance to an opinion which we are grieved to see again brought to light. "Even taking the words of Solomon," says the writer just mentioned, "in the sense commonly understood, why might they not refer to the common opinion respecting any creature, when it afforded the moral lesson which he desired to inculcate. The sacred writers generally regard it as no part of their duty to set right all the popular notions of common things, but use them, as poets and moralists have done in all ages, to enforce their teachings, and illustrate their arguments." And will Dr. Kitto say that they would refer to the common opinion if it were erroneous, or that they would base a moral lesson on a falsehood? The words quoted amount to this:—This language is unworthy of any one who acknowledges the Divine origin of the Bible, and is at complete variance with the facts of the case. It is indeed a statement almost as rash as one which we were astonished to see in a work, written by a minister, and differs in little, except in the form of expression, from the assertion that "the Scriptures are not to be considered as unerring guides in natural, although they are in moral and divine matters!"

Again, if we take up the other opinion, we must of necessity admit, notwithstanding the assertions of Hammond and others, that the illustration of the Ant, although in many respects an excellent one, is altogether inappropriate in the *main point;* and to believe this would be to hold an opinion in the most direct opposition with the fact of Solomon's being an unrivalled naturalist, and the "wisest of men!"

Such then is the awkward situation in which matters remain, and no wonder that the Bible-student should be at a loss what to do. And now having attempted to fulfil the first promise made in the outset, we shall proceed in the next place, (to repeat our own expression,) "to bring a light sufficient, we trust, to enlighten his gloomy station, as well as to assist him in reaching the top."

The light we are to produce is brought from a far country, and in the opinion of some, may prove but a rushlight: admitted. Let it be remembered that a rushlight is very commonly used in the ascent of literal stairs, and surely a metaphorical rushlight may be equally well employed in the same manner, in the case of metaphorical ones. The bearer of the lamp is a veteran in science, and is well known to every Naturalist. His name is a "household word" at our British Associations, Entomological Societies, etc.; and we of Marischal College and University, recently manifested our respect for him, and our appreciation of his acquirements, literary as well as scientific, by electing him our lord Rector. We speak of Colonel Sykes, and we could say much more about him, and about the speech delivered by him at his Installation, were it not that we hear a voice desiring us to show the light, in order that it may be known whether it will prove an *Ignis fatuus* "a will o' the wisp," or not. Here it is then—"In June, 1829," for we prefer the original statement, "in my morning walk I observed more than a score of little heaps of grass seeds, (*Panicum*,) in several places on uncultivated land near the parade ground, near Poonah, where I was stationed; each heap contained about a handful. On examination I found they were raised by a species of Ant, (*Atta providens*,) hundreds of which were employed in bringing up the seeds to the surface from a store below; the grain had probably got wet at the setting in of the monsoon, and the Ants had taken advantage of the first sunny day to bring it up to dry. The store must have been laid up from the time of the ripening of the grass-seeds, in January and February." Is this light enough on the subject? we venture to think that it is, and trust that it may prove satisfactory. Had the observation been made in the Holy Land, we should have considered it as *completely* so. And we feel assured that the deficiency comes from the want of a diligent investigation, by some well qualified Entomologist, of the insect tribes of that memorable country. Would that some one would set out, with the enthusiasm of a crusader, and bring us back the birds, the beasts, the insects, and the shells of Palestine, as the celebrated Hasselquist departed, at the desire of Linnæus, to obtain the floral treasures that awaited him in the land of Canaan. Yet we know not but some Naturalist may have seen the very species intended by Solomon, without making his discovery public, such a supposition receiving considerable support from many facts. Let us mention a recent one:—M. de Sauley, in 1850, or thereabout, explored the Holy Land, and was accompanied by several entomologists and botanists; what naturalist would not consider it tantalizing to be informed in every second page or so, of this gentleman's interesting work, which has recently appeared, that plants and insects were found in abundance; that the exploratory searches for coleoptera, lepidoptera, etc., proved very successful, without being told, except occasionally, and in very general terms, what insects were found and what plants discovered. We trust to hear more of these discoveries, however; and may possible come upon some of the *Atta* family, or perhaps be told that the *Atta providens* itself extends

to Palestine.

Such a discovery as that made by Colonel Sykes relieves us of our difficulty, and casts no dim light on a much contested passage, besides extricating us from the dilemma in which we were formerly placed. We can now affirm, without hesitation, that Solomon's reference to the Ant, in illustration of his subject, is not only quite correct, but also is worthy of his character as an observing Naturalist. We trust the "borrowed light" with which we have presented the Bible-student "for a dark landing-place," may be of some assistance to him in his upward progress to the attainment of completely satisfactory information on the insect which has detained us so long.

There could be few conclusions more appropriate, as connected with the subject, than the following one, with which we take leave of the reader. It is a pretty little fable by Lessing, as rendered by Dr. Hamilton, in his elegant work on "Ecclesiastes," page 143:—"It was a sultry day, and an avaricious old man, who had hoarded a large amount, was toiling away, and wasting his little remaining strength, when a heavenly apparition stood before him. 'I am Solomon,' it said, with a friendly voice, 'what are you doing?' 'If you are Solomon,' answered the old man, 'how can you ask? When I was young you sent me to the Ant, and told me to consider her ways; and from her I learned to be industrious and gather stores.' 'You have only half learned your lesson,' replied the spirit, 'go once more to the Ant, and learn to rest the winter of your years, and enjoy your collected treasures.'"

Aberdeen, April, 1854.

OCTOBER'S FAREWELL WEEK.

BY GEORGE R. TWINN, ESQ.

Monday the 24th. was a clear, brown, sunny day, that gladdened the heart, and caused you, nolens or volens, to turn out to enjoy the beauty of the autumn. As far as my eye could track around our hill, it discerned among the dark green Firs, (*Pinus sylvestris,*) the warm russet and golden branches of the bronzed Beech, (*Fagus sylvatica.*) In one direction the pale yellow of the dying Ash, (*Fraxinus excelsior,*) contrasted with the rich orange leaves of the Chesnut, (*Fagus castanea;*) in another the clustering Maples, (*Acer campestris,*) with their light stems of pale sickliness, were relieved by the richer brown of the Elm, (*Ulmus campestris;*) and over all the sunny sheen was falling very gloriously, making it a luxury to ramble out and gather wisdom from the lavish pages of Nature's wondrous work; on all which the impress of Him, who is the God of all, is descried.

Rambling adown our lane, that, branching from the high-road, leads to the village, we found the wild Geranium, (*Geranium,*) the Bladder Campion, (*Silene inflata,*) and the wild Mignionette, (*Reseda luteola,*) still in flower, and an abundance of those dear buds "that light pale October on its way;" also

our first specimen of autumn, the beautiful Furze-blossom, (*Ulex Europæus.*)

The 26th. was a day equally as lovely, and the Redbreast, (*Rubecula familiaris,*) was singing throughout it—a merry little fellow! We found in our walk round our village, the Holly, (*Ilex Aquifolium,*) in full berry; and gathered the last Harebell, (*Campanula rotundifolia,*) and a lonely Chicory flower, (*Cichorium.*) We were amused with a flock of Larks, (*Alauda arvensis,*) that enclosed in a ring a Kestrel, (*Falco tinnunculus,*) and so edged him in that he appeared utterly unable to elude them. At last, affrighted at their numbers, he sprang upwards, like a cork from a ginger-beer bottle, and was off.

The 27th. was a very wet day, raining in torrents, the wind direct west; and on the following morn it somewhat abated; but we found on the 29th. many fields on the banks of the Yare completely deluged, and the marshes one sheet of water. On this day, however, we had a Swallow, (*Hirundo rustica,*) at the old nest over our window, taking its "last look," we thought; like a friend reluctantly parting from its home. And on our taking a stroll in a beautiful garden, belonging to a neighbour in our village, beside the banks of the Yare, that adds great beauty to the grounds, we met with our first specimen of the Didapper or Dab-chick, (*Podiceps minor;*) which, though an annual visitor, we have never known before at so early a period; the late fall of rain, we imagined, had tempted it hither before its stated time.

A Blackbird, (*Merula vulgaris,*) was cheerfully enlivening a Lauristinus, beneath which a crimson Lobelia, (*Lobelia fulgeus,*) was in lovely show.

On our return home we saw a large company of Starlings and Rooks, (*Sturnus vulgaris et Corvus frugilegus;*) and found on a Hawthorn tree, *Cratægus oxyacantha,*) a body of hen Chaffinches, (*Fringilla Cœlebs,*) about eighty in number, evidently preparing for their well-known migration. Overhead the Lark was in full song.

On the 30th. we saw two Swallows at our nest several times during the day; and on the 31st. we captured, in the sunlight so pleasantly warm, a good specimen of the Privet Moth, (*Sphinx Ligustri,*) calmly sleeping; and we saw a Red Admiral, (*Vanessa Atalanta,*) basking on a Larkspur, *Delphinium,*) in our garden; we were not equally fortunate in securing him. On the evening of this day, from half-past six to nine o'clock, we were gratified by a beautiful display of the Aurora Borealis;—after darting pyramidically for a length of time, with many coruscations similar to the zodiacal light, it gradually extended itself in a semicircle, from the East towards the S. West, and with a pale but bright light, formed a lovely arch, like to a lunar rainbow. Have any of the readers of "The Naturalist," noted whether these northern lights are the heralds of frost or of rain? More frequently, when I have seen them, they have been precursors of storm and wet, rather than frost; though always rendering the atmosphere very cold.

Thus gloriously expired October, the "nut-brown" month! whose death was amid smiles; and we feared his successor would awaken us to the reality of

how much loveliness we had lost; but November dawned on us in rich effulgence, a very clear and sunny morn, equalling those of the late month; and we took a morning airing, conscious that many such could not be enjoyed by us. We wended our steps by the boundaries of Colney Park, about a mile from our hill; and the first object that engaged our regard was a party of three Squirrels, (*Sciurus vulgaris*,) garnering the fruit of a fine oak for their wintry store. This is a very pleasing trait of *foresight* possessed by these animals, the *wild nature* of whose lives, frisking from spot to spot, with a possibility of straying to any distance, either voluntarily or by compulsion, would betoken *perfect heedlessness* to any future provision. But we are compelled to admire God's love in furnishing this little animal with *powers of prudence*, and of *memory in some degree;* for how, otherwise, should he know the very cellar in which he has carefully deposited his nuts? In some stores we have even found a cluster of moss, gathered from the banks, closely enveloping the buried treasures; and then, over the entrance, the dry leaves of the oak carefully laid.

In the spring of this year, the man employed in repairing our roads, told me, that when engaged for upwards of a week near Colney Park, he daily had visits from three or four of these pretty English quadrupeds; that when on the hedge-bank, partaking of his dinner, they would approach within so small a distance, and display so much tameness, that the bits of bread he threw them in no way alarmed them, for they would eat contentedly and quietly; but on his rising they always retired very hastily.

I have known one of these highly amusing creatures confined for several years, and all attempts on the part of its mistress to tame it, were ineffectual; nor do I recall any instance of its being domesticated or familiarized.

And now I record my last observation of a Swallow, on the evening of this day, November 1st.; at about a quarter past four, I saw one wheel over our garden several times, as though, in its solitariness, quite undone: it departed for the west, as if winging its flight towards Lynn. "Poor lonely bird!" thought I, as I entered my dwelling, "thou art the care of my God, by whom the fowls of the air were created, and are still supported; and He will regard even thee; for not a sparrow falls to the ground unknown of Him."

Bawburgh Hill, near Norwich, November 12th., 1853.

Miscellaneous Notices.

Variety of the Redwing, (Turdus iliacus.)—I have to inform you of my good fortune in shooting a beautiful variety of the Redwing on the 27th. of December last, in a field opposite Dulwich College. The crown of the head and the back are handsomely varied with white and brown; cheeks and breast, nearly white; tail and quill feathers of the usual colour, with the exception of a few white feathers; it retains the usual red tinge beneath the wings, shoulders of the wings pure white.—C. Wood, Dulwich, April, 1854.

Note on the Wryneck and Chiff-Chaff.—I have this day, for the first time this season, heard the Wryneck, (*Yunx torquila*,) also the Chiff-Chaff, (*Sylvia hippolais.*)--Idem.

Anecdote of the Robin, (Erythaca rubecula.)—I have just heard the following interesting circumstance, and thinking it might be worthy of notice, I send it for insertion in your valuable journal, "The Naturalist," if you should consider it of sufficient importance. A friend of mine, who, a few years ago resided at Bank House, Burnley, was in the habit of feeding daily a well-known and favourite Robin. An envious Sparrow coming one day to join in the good things provided, was driven away by the Robin, and not well pleased at the treatment it had received came again, attended by superior numbers, so that now it was the Redbreast's turn to be defeated, but only in the way of "living to fight another day," for the next day to the surprise of my friend and his family, a Crow, *(Corvus corone,)* appeared with his red-breasted friend, and kept away all intruders, whilst they partook of what was set before them amicably together. They came several days in company, and then were both quite lost sight of. However strange this may appear, I have the same confidence in it as though I had myself been witness of the affair: it was seen by many members of the family.—Thomas Kirkham, Manchester, February 26th., 1854.

Occurrence of the Common Crossbill, (Loxia curvirostra,) *in the higher districts of Banffshire.*—A small party of these birds, consisting of five individuals, was observed a few weeks ago in a fir plantation near Duffbarsen. They were in active operation when first seen, feeding on the seeds of the fir cone. The cones were split with remarkable dexterity and apparent ease. Two were procured—a male and female.—Thomas Edward, High-Street, Banff, February 11th., 1854.

Note on the Blackcap, (Curruca atricapilla.)—I was much surprised on the 10th. ult., being then at Wynyard Park, at seeing a Black-cap: surely this is a very early appearance for this bird; the day was warm, with a westerly wind: there could be no mistake, as I took particular notice of it.—George Hodge, Seaham Harbour, March 7th., 1854.

Anomalous Eggs.—Last summer I obtained, from a Grey-bird's nest, two eggs about the size of a "Twite's," but rounder, with dark red spots on the small end, with a greenish ground, these eggs had no yolks I also received a Pheasant's egg, taken from a nest containing twenty, this egg was about the size of that of a Common Bunting but rounder.—Idem.

Wanton Cruelty.—A circumstance occurred the other day, in the vicinity of Ripon, which reflects no honour to amateur sportsmen on the highways. The same circumstance, I fear, is now practised daily, with no credit to parties connected therewith. I saw in the heavens a Lark, one moment happy in its song of adoration, and nearly the next it was seen torn away with the sod upon which it had settled, by a ruthless fellow who levelled his gun and successfully closed the happy throbs within an innocent and joyous little breast. The Lark seems sacred, at this time of the year, to all human feelings for protection; but toasted Larks appeared more prized than a cheering song, by a person who went larking against Larks.—C. W. Rothery, Ripon, March 30th., 1854.

Note on the Starling, (Sturnus vulgaris.)—In the December number of "The Naturalist," I noticed an article on the malformation in the bill of a Starling. When I was at school in Berkshire a pair of Starlings had a nest in an old acacia tree, we one day caught the hen bird on the nest, and were surprised to find that her bill was quite crossed, and was very much longer than is usual with them. It was nearly two inches long and crossed about the middle, so that the bill was something of the shape of a pair of half-open scissors. We caught the same bird the following year, in fact I dare say she, with her mate, continues to build there now, nobody caring to notice her deformity with anything more than curiosity. At the same time and place I was in the habit of going on a night and attempting to catch birds roosting in some stacks of clover near the playground. One time I went and put my hand in one of the holes, to my astonishment I found in there a number of Wrens, and when I took my hand out I found there were *seven* of them. I had often seen two fly from the same hole but never more, I do not even remember that it was particularly cold or wet at the time. Yesterday I found the first nest I have seen this season (except rooks') it was a Robin's, just finished and ready for eggs. I also noticed that the Starlings were building in the turret of a friend's house.—H. D. Drury, Jun., Grote's Buildings, Blackheath, March 28th., 1854.

Occurrence of the Sandsucker, or Lang Fluke, (Platessa limandoides,) *in the Moray Frith.*—A female specimen of this rare *Platessa* was caught a short time since by Mr. Andrew West, of M'Duff. In several works on Ichthyology to which I have access, I do not find this species mentioned in any, as having been found on this part of the British coast. Neither does the Rev. G. Gordon, of Birnie, include it in his List of the Fishes of the Moray Frith, published in the "Zoologist" for May and June, 1852.—Thomas Edward, High-Street, Banff, February 11th., 1854.

Occurrence of Yarrell's Blenny, (Blennius Yarrellii,) *at Gamrie.*—One of my girls, Maggy by name, having been down lately at Gardenstown, zoologizing there for me, and passing from hence one day on a professional ramble to a neighbouring village—that of Crovie, along with a friend of mine—Mr. R. Gordon, of the former place—and just as they had rounded a particular rock, called the "Snoak," they observed a small fish being washed ashore, which Mr. G. kicked with his foot, thinking that it was of no use; and remarked that "it was a young *Sea-cat*." "Na," replied his companion, at the same time picking it up, "it 's nae a Sea-cat, it 's ower thin (ribbon-like,) for that; I dinna ken fat it is, but I 'll tak it an' sen' it hame to my father, for he bade me nae miss naething o' this and o' native kine." Accordingly 'hame' in due time it did come, and proved to be, not a Sea-cat, but a very fine specimen of the above Blenny. I am not aware of its previous occurrence in this district. —Idem.

Occurrence of the Black Goby or Rock-fish, (Gobius niger,) *also at Gamrie.*—A specimen of this rare fish was likewise sent me from Gardenstown, along with the Blenny. It was taken from the stomach of a friendly Cod-fish, by Maggy, my young zoologist. The stomach, I understand, was picked up by her from a *midden* in Crovie. I am not aware of this species being cited on any work on this subject as having been previously detected in the Moray Frith. It is not mentioned in Mr. Gordon's list, already alluded to, although he notices the Freckled and the Lesser-spotted species as having been found.—Idem.

Occurrence of Anomia pattelliformis *and* Lima minuta *at Banff.*—It is to the zoologizing propensities of my little friend Maggy that I am indebted for the discovery of these two species, she having picked them up where the fishermen clean their lines. I believe that although these shells are not unfrequent in other parts of Britain, they have not been before found on the shores of the Moray Frith.—Idem.

Vanessa Antiopa *at Blackheath.*—In "The Naturalist," for January, I observe an article on the capture of *Vanessa Antiopa* at Blackheath, it seems that it is not of very rare occurrence, as a young friend of mine caught one, last year, in a garden, at the back of Montpelier Row, of that place. I think it worth while to mention that I caught on the 12th. inst., a Peacock Butterfly, (*Vanessa Io*,) in a garden with a southern slope. This seems as if it had wintered in the perfect state, as it was rather rubbed when I caught it. In the same garden also were seen some of the Common Whites, and a Tortoise-shell Butterfly, but which were not caught. —H. D. Drury, Jun., Grote's Buildings, Blackheath, March 28th., 1854.

The Hybernation of specimens of the various species of the genus *Vanessa* is not uncommon; we are not aware that the Whites hybernate, but the 12th. of March is extremely early for their appearance.—B. R. M.

The Querist.

Early in May, I gathered a Wild Hyacinth, (*Hyacinthus nonscriptus*,) perfectly white, being the only one I could meet with during five hours ramble through woods covered with thousands of the blue species; so that I imagine it is but of rare occurrence, at least in the neighbourhood of Southampton. Perhaps some of your botanical readers will kindly inform me if I am right in my conjecture.—Sidney Hyle, Southampton, May 9th., 1854.

Is there any Natural History of the Channel Islands? Are there any naturalists living there? Can any of your correspondents tell me the names of such?—F. O. Morris, Nunburnholme Rectory, July 1st. 1854.

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NOTICES TO CORRESPONDENTS.

Communications have been received, up to August 20th., from MR. T. LISTER;—S. STONE, ESQ.;—R. MC LACHLAN, ESQ.;—J. LONGMUIR, ESQ., JUN.

Contributions have been received, up to August 20th., from J. CROOME, ESQ.;—J. CAVAFY, ESQ.;—S. CLOGG, ESQ.;—T. S.;—J. ROSE, ESQ., M. D.;—J. DIXON, ESQ.;—G. R. TWINN, ESQ.

Books Received.—Nos. I and II, of "The Natural History Review." Dublin: Hodges and Smith. London: Simpkin and Marshall.

Nos. I, II, and IV of "The Cabinet of British Entomology." By C. Weightman Harrison. Three Coloured Plates in each number. London: Simpkin and Marshall.

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RANDOM RECOLLECTIONS OF THE CAT.

BY JOHN DIXON, ESQ.

"A catt may loke upon a kynge."—OLD PROVERB.

THE character of your "harmless, necessary Cat,"* has generally been so much censured by the world at large, that it would seem almost dangerous to hazard any remarks in opposition to the many charges preferred against it, on the score of being a most cruel and malignant good-for-nothing, and totally devoid of all that affection and sagacity which characterizes its common enemy the dog: while we readily admit some portion of the latter to be true, there may still be found good store of published anecdotes,† from which it may be seen that "poor puss" is by no means devoid of a vast amount of affection, attachment, courage, gentleness, patience, and a host of other amiabilities, which the eye of prejudice has either disregarded or overlooked. But I feel certain that if its habits were only made the subject of a little quiet observation, there would be found many pleasing traits, which would go a great way to counterbalance a few of those bad qualities from which the best of us are never free. The disposition and temper of most animals is as varied as our own, but certainly not quite so stubborn and unyielding; and if we would only practice that very simple word—kindness—rather oftener, we might at least eradicate many of our prejudices against the Cat, by finding that it, like most other domesticated animals, can repay our attentions with both affection and attachment.

A country fireside seems almost imperfect without its dosing Cat and chinking crickets, at least in my quaint old-fashioned way of thinking, and the purring of some sage grimalkin is music to my ears, breathing of that homely comfort which our favoured land can so well bestow. One little incident connected with a long sojourn in a rural district has often struck me; it was during an evening in December that somehow or other I had the whole house to myself, and might, at that particular time, have been found in an uncommonly quiescent mood, promoted no doubt by being so snugly ensconced within the chimney corner, up which a lively fire was crackling and roaring in very glee at the comfort it diffused around; at least it might have thought so, for the night was just such a one as you would not turn a dog out in. The rain was falling in torrents, and came pattering heavily against the windows, while the old trees creaked and groaned in concert with a howling northern blast. We can all appreciate the warm fireside on such a night, and yet how few of us can ever give a thought to the hard world without, with its houseless naked wretches, groaning beneath that load of misery which too often death alone relieves. At such a time King Lear exclaims—

> "How shall your houseless heads, and unfed sides,
> Your loop'd and window'd raggedness defend you
> From seasons such as these? O, I have ta'en
> Too little care of this!"

* "Merchant of Venice." † "Chambers' Miscellaneous Tracts, First series." "Magazine of Natural History, (Loudon's.") etc.

BRITISH MUSEUM NATURAL HISTORY

This reverie was abruptly broken off, by the piteous mewing of a poor Cat, and on going to the outer door there stood "Tommy," drenched to the skin, who, I presumed, had just returned from some little affair of honour or "clapper-clawing" forage, and was now in good trim for enjoying the comforts of my lonely fireside. He soon made himself most indolently cozy, for the crickets came frisking under his very nose with bold impunity; what cared he about them, he too was musing, and

"Purring, purring, purring, with a soothing dreamy sound."*

I had taken up Washington Irving's delightful "Abbotsford and Newstead," and rather singularly happened to hit on the very page where this graphic writer has given us a pleasing anecdote connected with Sir Walter Scott and his favourite Cat. I shall only spoil the story by omitting the extract, so here it is. "Ah!" said he "these Cats are a very mysterious kind of folk. There is always more passing in their minds than we are aware of. It comes, no doubt, from their being so familiar with witches and warlocks." An idea which always tickled the fancy of the amiable "author of Waverley," whose vast mind has woven the thin gossamer of a fast fading lore into such fabrics as will ever charm both old and young. One of his pleasing characteristics was an attachment to dumb animals, and in point of kindness towards them he was particularly sensitive;† which tempts one to wish that there were more Sir Walters in the world at present.

At what period the Cat formed such alliance with his satanic majesty's emissaries we are at a loss to determine; but there is scarcely any nursery story, of an old date, introducing its wrinkled hag without a companion in the shape of some enormous Cat, whose presence seems fully requisite for carrying out some diabolic incantation. There are legends still extant in the "north countrie" which beat hollow the wondrous deeds of "Puss in Boots," the "Cat and Fiddle," and all the revised editions of "Dick Whittington" the press has vomited forth, to the genuine delight and edification of its juvenile supporters. Hence we find a certain amount of superstition still cherished by many vulgar minds towards the Cat, which has led it into more scrapes than enough. But a good deal of this is fast dwindling away before that march of common sense which has well-nigh extirpated the whole tribe of witches, wizards, brownies, and spunkies, which had so long existed to the terror of our great—very great grandfathers and grandmothers.

Why the Cat should have been accused of participation in these deeds of darkness, in preference to other animals, I cannot clearly determine, unless it arose from "poor puss" being often the only solitary friend, left those miserable wretches, generally old women, who were so far unlucky as to incur the least suspicion of being concerned in witchcraft; who, shunned by all humanity, were now doomed to run the gauntlet of those fearful times, when

* "Moncrieff's Home Mythology" — "Illustrated London News, December 20th., 1851."
† vide "Memoirs of the Life of Scott, by Lockhart."

the blood of hundreds of innocent but hapless beings was poured out to quench the hideous raging thirst of deluded fanaticism and bigoted superstition. In many of the trials of this "reign of terror" one could almost be tempted to laugh at the amount of ridiculous credulity displayed by many of the principal actors in those tragic dramas: men who could be so far led away by the wildest and most extravagant narratives it is possible to conceive, as to become active agents in carrying out the most fiendish cruelty in prosecution of that fell sentence, "thou shalt not suffer a witch to live."* And all this was enacted in the so-called "good old times." Well, let us be thankful they are past and gone, never again, I hope, to return. Let us rejoice that we live in an age of enlightened reason, with only the *moon-struck* Bear of Russia to bother us; and he, poor brute, must be "muzzled" ere long.

We now perceive how it occurs that

> "Cats are thought imps, her broom a nag,†
> And boys against our lives combine,
> Because, 'tis said, your cats have nine."

And then the De'il himself in one of his "tantrums" is told

> "Some cock or cat your rage maun stop."‡

I have no doubt that a great many of these marvellous stories of ancient date, have had their origin in exaggerated anecdotes; the age was ready enough to snatch at any trifle out of the common line, and at once set it down as something in "no way canny;" and there were few quiet observers of nature at that time, who dare attempt any refutation of vulgar opinion. Some of our old naturalists have given us very pleasing accounts of the Cat, yet do not forget to tell of its being a most malicious animal; selfish to an extreme, and entirely devoid of all gratitude. One antiquated author says they are very good in their place, but best kept at a distance. Goldsmith scarcely does "poor puss" justice in his pleasing essay,§ he speaks about patience, which we regard as a virtue, and says a Cat has been known to watch a mouse's hole the livelong day; but if we take up a few more modern effusions on Natural History, we shall soon be convinced that our feline friend has some small claim to that kindness we might well bestow. For my part I stand friend to both Dog and Cat, and when very young acquired a tender feeling towards them, and a further taste for any of Nature's handiwork, solely I believe from reading Aikin's pithy story of "Eyes and No Eyes, or the Art of Seeing;"‖ it inspired a love of observation I have never forgotten, and from having had both eyes and ears open for some time, have consequently managed to pick up a good budget of anecdotes relative to both Dog and Cat. Some that have been vended me are no doubt, as Jamie Hogg has it, "great lees," and

* "Scott's Letters on Demonology and Witchcraft;" "Roby's Traditions of Lancashire;" and Gifford's Dialogue concerning Witches and Witchcraft," 1603; reprinted by the Percy society.
† "Gay's Fables." ‡ "Burns' address to the De'il." § "Animated Nature." ‖ "English Reader."

"Of some the aboundance of an ydle braine*
Will judged be, and painted forgery,
Rather than matter of just memorie."

So that I shall keep all the marvellous to myself, and without treading in the foot-prints of other worthy narrators, endeavour to give, as briefly as possible, a few simple facts which will perhaps tend to put "poor puss" on a *little* better footing with some of its accusers.

The Cat's antipathy to water is proverbial.

"The Cat fain fish would eat
Yet she is loath to wet her feet.

Again an old Scottish poet draws a simile after this fashion—

"The Cat,†
They wald na weit their feit,
But yit if ony fisch ye gat
They wad be fain to eit.

A friend of mine, William Wood, Esq., of Whinbrook, Moorallerton, tells me he well remembers a Cat at Aberford Mills, that was a regular fisher in the little rivulet there, (the Cock.) So soon as the wheels were stopped, and the mill race once again placed, puss might often have been seen, generally at noon, swimming and diving about in pursuit of her finny prey. It was not exactly "bobbing for eels," but "tickling trout," that was most to her fancy, and when these grew scarce, smaller fry in the shape of minnows, were made to suffice: "better sma' fish than nane." I believe that this is not the only instance of the kind on record, but at any rate it is a curious feature in the Cat's habits, whose particular relish for fish rarely induces them to follow the "gentle craft" after this style.

I have known them take to water in time of peril, such as when closely pursued by some uncivil dog, when no friendly tree has been at hand to afford a shelter. In some parts we may still fall in with your Corporal Bunting Cats,‡ who, turned adrift with a roving commission, commit sad depredations among both game and poultry. A farmer once told me he lost several young ducks by one of this class, who made little scruple about launching himself if need required. But you will rarely find them turn out badly if they are well fed and properly cared for. It is only your poor half-starved and ill-used wretches who take to keeping themselves at the expense of the squire's sport or farmer's pocket.

I recollect two male Cats kept at a farm-house at Pannal, remarkable for their opposite dispositions; the least of them, for there was some little difference in their size, was a regular spitfire, and invariably the first to bring the major up to scratch, the conflict generally ending in favour of the least, not, I am sure, from any superiority in tactics, but the more peaceable nature of the other, who generally beat a retreat, and perhaps absented himself

* "Spenser's Fairy Queen." † "Alexander Montgomery—Elizabethan Era." ‡ "Bulwer's Eugene Aram."

for a full fortnight together, before again venturing home.

My friend, Mr. Wood, will remember the amusement we derived from some remarks made by Mr. Waterton, in reference to the temper of his Cats, during our visit to Walton Hall. We were watching the movements of a flock of Canadian geese, when one of the Cats stole into the drawing-room, and came rubbing and purring against us. Mr. Waterton put him on the chimney-piece, to let him have an opportunity of admiring his comely form in the glass. The Cat seemed remarkably pleased with his elevated position, but we were given to understand that it was not *the* favourite. "My other," said he "has a most beautiful temper, which is more than I can say for this gentleman." Our short stay prevented any judgment in the matter, but we saw both specimens—monsters in size—and fed up like civic aldermen; and, if a fit of apoplexy has not carried them off, I have no doubt but they may still be found, leading a most jolly life amidst the hospitality of the far-famed Walton Hall. I was once conversing with a person who, although no naturalist, had been most marvellously delighted with the Waterton collection; one of his first questions was "did you see the Cats, for," said he, "they are regular 'pummers' and no mistake." It is no unusual thing for Cats to get much attached to dogs, particularly where they have been brought up together, and the pleasure they seem to derive from each other's society, in a great measure refutes our ideas of "a Cat and dog life," which we find can be a happy one where kindly feelings exist on both sides. An instance of this was pleasingly exemplified in the attachment existing between a Cat and an old pointer bitch; they would gambol together for hours, and never once got across during a friendship which lasted until the dog's death.

Some few years ago, we had an odd exhibition traversing the streets of Leeds, rejoicing in the name of "The Happy Family;" it was a large cage mounted on wheels, and well stored with a most heterogeneous mass of animated nature. There hawks, owls, pigeons, blackbirds, starlings, etc., in close communion with rabbits, guinea-pigs, squirrels, rats, and mice; and to make the thing complete a most harmless Cat was pacing in the midst of this zoological collection, to the great delight of a never-ceasing round of curious spectators. It would have been a much happier family, however, without the presence of a little blue-faced monkey, who was continually on the stir—pinch his neighbours he would, and none got more "monkeys' allowance," or bore it more quietly, than poor puss. Then up he would bounce, first on to one perch then another, upsetting both hawks, owls, and everything else that came in his way. I laughed heartily at his antics, but could scarcely feel sorry when one of the perches gave way and precipitated him into a large bowl of milk below.

This happy family cat was very different to one whose cruelty had well nigh broken the heart of one of my early school-fellows. He kept some tame rabbits, which were often allowed to run within the limits of the fenced garden. One of them was preparing for a family; the poor creature

had formed a burrow quite unobserved, and laid her breast completely bare in lining it with her own fur. She was allowed to remain altogether in the garden with seven young ones. In a day or two three of the latter were missed, the following day another, until at last they had all disappeared but one, in spite of much precaution; and to crown all, the poor mother was at last found dead in the burrow, a victim to the Cat's ferocity. This Cat was a regular pest to all the rabbit fanciers in the neighbourhood, and defied all attempts to take it dead or alive; its former owner had doubtless got tired of it, and as there are precious few people who give themselves much uneasiness about a Cat's feelings, it is very easy to put them into a convenient bag or basket, travel a few miles, and then politely invite them to step out and try their luck in a new quarter. Some are fortunate to meet with protection, others get kicked and knocked about, grow reckless, and turn out regular blackguards, generally ending a career of infamy in some convenient pond. I heard of a Cat "bagged" in this manner, and transported from the purlieus of Holbeck, through the heart of Leeds, and put down "gratis" at Roundhay, a distance of some miles. Now this was done by command of a good old soul who did not like the idea of drowning the poor wretch, and she might have been pluming herself on her humanity some days after, when a well-known voice was heard at the street door, and, will it be credited, in bounced the very identical Cat who should have been ruralizing at Roundhay, or Jericho for anything I know. Well, who could have found in their hearts to "bag" him again? certainly not the old woman, therefore puss staid at home without seeing more of the world than his own immediate neighbourhood afforded. To get home the Cat had travelled some six or seven miles, and how, in the name of fortune, it had ever found its way through the intricacies of the town, and unharmed, must for ever remain a mystery.

When Cats have a good home they can appreciate it, perhaps better than most other animals, for while you find the dog can make itself at home wherever the master goes, the Cat seems actuated by different motives, and is oftener more attached to places than persons, and consequently is made a most unhappy being whenever a "flit" takes place. It will generally be the last piece of furniture left. A family in going to a new house, had of course removed a favourite "tabby," yet, notwithstanding all coaxing and cajoling, puss could not make herself at home, but scampered up and down the place like a very devil, uttering most dreadful cries, running up a chimney, and concluding with bolting through a pane of glass, and making her way to old familiar quarters, was there again found sitting most disconsolately within the threshold; food was given her, but nothing could induce a return to the new quarters; at last the old house was again taken, and out of compassion "puss" got reinstated as a permanent lodger, to her heart's content.

It was only the other day I noticed a poor Cat mewing most pitcously at the door of a house which had been empty some weeks; the Cat had been well cared for, but could not be reconciled to the change. We may

often hear of them, too, displaying attachment to particular individuals, and evincing great pleasure in their society. One of my friends had a Cat of this stamp, which invariably presented herself to notice in the bed-room at one particular time in the morning; and if it so happened that the bed "pulled hard," as the saying goes, and induced a longer nap than usual, puss would soon begin to give mouth, jump upon the bed, and there would be little peace until all were up and stirring; when she would jog quietly down stairs, and there await the regular breakfast. Beneath one of the front doors a piece of oil-cloth was laid, which formed a sort of Cat's alarum, for whenever puss kept untimely hours, and, as an attendant consequence, got bolted out, instead of mewing at the door for perhaps an hour, she would contrive to introduce one of her paws beneath it, get hold of the oil-cloth and drag it about, which never failed to attract attention and a speedy admittance. This Cat was much attached to one member of the family, who with a load of infirmities, consequent on green old age, was confined to bed, by the side of which the poor Cat would sit for hours together, preserving the gravest silence; and when at last it pleased God to remove his servant to a happier world, the Cat remained in the chamber of death for many days after.

The anxious solicitude displayed for the safety of their young, has often been beautifully exemplified in many well-authenticated anecdotes, replete with a most marvellous amount of instinctive ingenuity, carried out under such peculiar circumstances as could not fail in exciting the sympathies of the most careless observers. I can only relate one little anecdote touching upon this; and it is scarcely worth recording; it was a cat that had had four kittens; three were consigned to a watery grave, consequently the whole of pussy's care had now to be lavished on the one dear object left. Some few days after, a tortoise was brought into the house, set down on the floor, and feeling himself at home, like all other good fellows "came out of his shell" and began to expand his knowledge by a few turns round the apartment. The cat had her "twa ees" riveted upon the curious customer for some time, but seemed to understand precious little about him, any further than keeping out of harm's way, at a long range. After shewing some uneasiness, she took her youngster up and ran upstairs, where it was found deposited alongside its mother, snugly incased between the coverlet and blankets of a bed. In due time the cat's fear wore off, and at last she began to look on paddy's "walking snuff-box" with sovereign indifference, for constant companionship had demonstrated its harmless habits and friendly disposition. The cat and tortoise were long together, and lived to assert the truth of "use being second nature."

An instance of ingenious sagacity almost rivalling Æsop's "Jackdaw and Pitcher" was displayed by a cat, who, like many more of his brethren, was particularly fond of stolen sweets. One day, it so happened, that a comical looking old-fashioned cream-jug was left alone on a table, containing a small quantity of the rich fluid, which speedily attracted puss's attention; who thought

in all conscience there would really be no harm in tickling his palate with the smallest quantity in the world; besides who would be the worse, even if he took it all; a piece of reasoning no way calculated to stop "a watering o' the mouth." What a misfortune! I cannot get my head into it. Must I upset it? certainly not. I have suffered stripes innumerable for such clever performances, and since I cannot get my head within compass, I 'll e'en put my foot into it. A clever expedient most assuredly, and what could have been daintier than his own "cat's paw" well saturated with such luxurious sauce. Another little anecdote shews some amount of reasoning instinct in a cat belonging to a small shopkeeper, which was regularly in the habit of opening the shop door if it chanced to be shut against it. It generally managed to hang with one foot to the iron loop while another was employed in pushing down the "sneck"* or latch. In opening the door a bell was rung, which often brought "master" into the shop, to welcome no better customer than his own cat. Another cat had a mischievous propensity for opening the door of a clock case, getting inside, and if the pendulum was in motion she would be sure to stop it. One day the pendulum would stand it no longer, but came down with a rattle, an affair which wound up the cat's fun for the time to come, the door being carefully locked ever after. It is not often we hear of cats taking a liking to eggs, but I know an instance of one that was passionately fond of them, and it was dangerous to leave any exposed, the cat being almost sure to break a few, and enjoy the contents. I think this habit had been acquired from egg-shells being given it to play with when a kitten. I have seen kittens devour great numbers of the Common Cockroach, although they often appear to suffer considerably from such fare; yet, you rarely find an adult cat touch them, although they hunt and devour crickets greedily. Cats never seem to relish meat *too hot*, but will throw it about for some time, for the purpose of giving it what I have heard termed a "keeling-clauk."† A curious *killing* "clauk" was once witnessed by a friend of mine while on the top of a stage-coach: they were changing horses at a little road-side inn, one end of which was beautifully covered with a large pear tree in full blossom. A Cat was observed nestling among the branches, evidently bent on mischief; immediately after a company of pugilistic sparrows congregated beneath, totally unaware of the presence of so powerful an enemy; the seconds were chirping most vociferously in support of the amorous melee, and just as the battle was raging most furiously, down dropped the Cat, with a sort of "how do ye do" into the very thickest part of the noisy crew: for one brief moment all

* "Sneck, old word for latch."

"Tip-tae she tript o'er the floor,
She drew the bar, *unsneck'd* the door."
JAMIESON'S BALLADS.

"Snecketeck. Latch the 'heck' or half door, generally found about farm buildings. Heck means a manger as well.

† Keeling-clauk, Cooling-scratch. Keel is a common north country word, signifying 'cool.' Thus Shakspere says, "While greasy Joan doth *keel* the pot." It occurs in many local names, as Kilburn, the cold burn or rivulet. Kildale—Killingbeck, the cold ing (or meadow;) beck, a stream.

seemed petrified with terror, and it was not until two of their braves had fallen that the rest could make off.

Some of my readers will rejoice to hear that my "Random Recollections" can now carry me no further; my notes I know are but indifferently let off, and I must now fiddle my tune out entirely on shifts. Some of you will perhaps tell me to take a lesson from Æsop's Cock and Cat, which I understand runs thus:—"Puss had a month's mind to be upon the bones of him, but was unwilling to pick a quarrel however, without some plausible colour for 't. Come, come, says puss, without any more ado, 't is time for me to go to breakfast, and Cats don't live upon dialogues; at which word she gave him a pinch, and so made an end both of the Cock and of the story."* This implies direct cruelty, which is again heightened by the following piece of ingratitude:—"Upon a time there was a Cat fallen into a fat of wort, and was almost drowned, the Cat cried out for help; the Rats hearing the cry, came and saw her misfortune; the Cat desired them in all love to help her out, and such a day she would give them a great reward, which they did. The day being come, the Rats made their application to the Cat for their reward; the Cat said she made no such promise; they proved the promise exactly. 'Well,' said the Cat, 'I do not remember any such promise, but if I did make any such promise, I was then in drink;' and was highly displeased with the Rats, and instead of rewarding them, she fell upon them, and killed several of them. I shall leave the moral application to you,"† hoping it will be regarded as "the aboundance of an ydle braine."

In conclusion, I can only hope that my poor endeavours may serve to amuse and at the same time engender a little compassionate feeling towards the animal creation in general, but more particularly towards our feline friend, who has suffered so much, and so long, in investigating whose habits we shall no doubt find much both to admire and condemn; but as there are none of us perfect, let us endeavour as much as possible to judge with kindness, and counterbalance the bad with the good. Do not let our friend have it to say, "good troth, you do me wrong, good sooth, you do,"‡ but let us so quicken our powers of penetrative observation, that we may find something to please and instruct, not only in the Cat, but in every living object with which a Divine Wisdom has so plentifully surrounded us. Nothing was created imperfect; the whole range of animated nature, from the noxious serpent to the gentle dove, uniting in one great cause for the fulfilment of some vast design, which the Omnipotent alone can comprehend: and to conclude, let us bear in mind that—

"He prayeth best who loveth best
All things both great and small;
For the dear God that loveth us,
He made and loveth all.

COLERIDGE'S ANCIENT MARINER.

Leeds, 1854.

Mr. Waterton's two magnificent Cats are still in perfection; or were last June, when we had the pleasure of enjoying our kind friend's hospitality and society at Walton Hall.—B. R. M.

* "Æsop's Fables. Sir Roger L' Estrange's edition, 1714." † "Humane Prudence, or the Art by which a man may raise Himself and his Fortune to Grandeur, 1657." ‡ Midsummer nights Dream."

A YOUNG CUCKOO REARED BY WRENS.

BY H. H. W.

Amongst the fosterparents of the young Cuckoo mentioned by Yarrell and others, the Common Wren (*Troglodytes vulgaris,*) is not included, nor does it occur to me that I have seen any record of an instance where the female Cuckoo has intrusted the care of her egg to the above-named little deputy.

A few days since, however, I had an opportunity of witnessing, with some friends, the interesting, and, as I imagine, unusual occurrence alluded to, in a cottage garden in the parish of Inkpen, Berks. The cottage was situated close to a fir plantation, in which, as well as in the garden adjoining, the Cuckoo had been constantly heard and seen from the earliest period of the season.

A pair of Wrens, well known in the garden, had built their nest in the thatch of a wood house, immediately over the door-way. The cottager, aware of the shy habits of the little birds, had on two occasions only introduced his finger into the nest. The first time he ascertained the presence of eggs. The second time, namely, on the 25th. of June, he found young birds, more than one little mouth encountering his finger as he imagined. Two or three days subsequently a young bird was found upon the floor of the wood house, immediately under the nest, which proved to be a Cuckoo. Nothing was seen of any little Wrens, but it was suggested, as probable, that the cat might have appropriated them, when ousted from above, for her own special use. As the foundling had evidently fallen from the nest, an attempt was made to replace it, but without success. The domicile was no longer capable of containing its late overgrown occupant. The bird was therefore put into a cage, and suspended from the branch of an apple tree close by, upon which the Wrens without loss of time resumed their parental offices, and when we visited the cottage on the 8th. of July, we had the pleasure of seeing them employed, as it seemed, incessantly, and without being much impeded by our observations, in feeding their insatiable nestling, which was then about ten days old, nearly full fledged, and at least four times as large as either of its diminutive protectors.

When indeed a finger was intruded into the cage, ruffling its feathers, and swelling itself out, it opened a mouth that appeared capable of swallowing its fosterparents bodily. Independently of the satisfactory proof as to the nest of the Wren being occasionally patronized by the Cuckoo, another fact seems to be established. The nest in question was built at the edge of the thatched roof, and had of necessity an inclination forwards; nor was the entrance larger than ordinary, so that it was next to impossible that the intrusive egg could have been deposited in the usual manner. It must therefore, have been conveyed to its asylum in the mouth of the Cuckoo.

The question was some time since discussed in "Kidd's Journal of Natural History," and it has, I believe, been decided on good authority, that the Cuckoo

sometimes assists in the nurture of its young. During the summer I have remarked the continued presence of a Cuekoo in a particular spot, and imagined it might be for the above object. Nevertheless, I eannot believe the fact, although admitted as sueh, to be of common occurrence. For we must, in this event, suppose either that the Cuckoo lays but a single egg, or that her eggs are laid in nests contiguous to each other, or that she passes from one locality to another, and visits her young in succession, neither of which suppositions are satisfactory. In the present instance no Cuckoo had been seen or heard in the garden since the discovery of the spurious nestling, and in another instance that has come under my observation this summer, the total absence of the Cuckoo seems equally certain.

We have more to learn regarding the peculiar habits of the Cuckoo, and I trust the pages of your journal may offer other communications from correspondents on the subject.

Combe Vicarage, Hants, July 14*th.*, 1854.

THE LAND-RAIL, CORN-CRAKE, OR DACRE HEN, (*CREX PRATENSIS.*)

BY JOHN DIXON, ESQ.

From my "Calendar of Observations," this bird seems to have generally arrived in our district the second week in May, between the 8th. and 12th.: a few earlier arrivals have been noted; some at the latter end of April; it is, however, unusual to hear them before the dates first mentioned. This present year they have been a little later than common, probably from contrary winds, whieh often have more effect in retarding the arrival and departure of migratory birds, than a continuance of cold or wet weather. When I speak of being "later than common," it must be understood as applying to this distriet only; other observers near the coast will perhaps be able to furnish different data. This bird eannot be called rare in Yorkshire, being heard during the summer months almost throughout the county; there may be a few solitary spots where it is rather searce, but this, no doubt, can be traced to the nature of the eountry not being compatible with its habits; but if you have damp meadows, or sheltered corn patehes, where the vegetation is rank enough to afford secure protection and a supply of food, you will be sure to hear its welcome note, not only throughout the livelong day, but a goodly portion of the night. It seems of a very restless habit, and in warm moonlight weather, I have heard it "crake" until an early hour in the morning; its solitary cry echoing through the profound silence that reigns on everything around. It possesses the power of ventriloquism to a certain extent; for sometimes you faney yourself close upon it, when the next moment it is far distant—too far in fact to be gained by running, yet leaving no doubt as to the notes issuing from one and the same bird.

They can run quickly through the rankest vegetation—a provision Nature has bestowed in part recompense for some little deficiency of wing; a deficiency we must not however term it, the bird being, without doubt, perfect in every part, and admirably adapted for performing the several functions for which it was created. If surprised unawares, it will fly a few yards, then suddenly drop and take to its legs, which seldom fail to carry it far out of danger. They are often decoyed to their own destruction, however, with a sort of toy much in request amongst the greater babies frequenting Greenwich Fair; it is made on the principle of a watchman's rattle, a small notched wooden wheel being set in a handle; over it is fixed a thin elastic piece of wood; and when this ingenious machine is drawn heavily across any object, it produces a sound so much like the Crake's call, that the poor unsuspecting bird is drawn to the spot, and only finds the mistake out too late. At best it is but a cruel expedient, and one that a person of any feeling will condemn.

It is surprising how this bird accomplishes its migratory movements, the wings seeming almost inadequate for continuing a long, fatiguing flight, or battling with adverse winds; and yet, regularly as the seasons roll round, does it obey the great mandate of instinct, and perils the passage of a wilderness of waters, to once more gain our sunny meads, and find a home wherein to foster its callow young. They always arrive in Orkney and Shetland during April, which makes me suspect that many migrate from the opposite coast of Norway. We occasionally hear of their alighting on vessels at sea, but I cannot learn of any being picked up about the coast in an exhausted state, although many must perish in the transition. They are generally very lean on their first arrival, some not weighing more than five ounces, but towards the period of departure, (September and October,) they are generally plump, and will weigh from six to seven ounces, forming delicious morsels I understand for your dainty-loving gourmand. I once heard an old man at Wistow say, that he accidentally found a Corn Crake's nest in a field in which he was mowing: the poor bird stuck pertinaciously to it, and only flew off in time to save herself from a stroke of the scythe, and the young birds from utter destruction. They seemed to have been but just hatched; the nest however remained unmolested, with a patch of grass about it; and, although the hay-makers were at work some days after, the parent bird gained confidence, and brought up the brood in safety. The old man further said, that the young were covered with blackish down "and followed t'oud un just like a hen and chickens." I heard a similiar story from the mouth of an old keeper, who stated that these birds in pairing, fought like "billy:" such men have better opportunities for observation than most people; but it is not always wisdom to repose implicit confidence in their statements, although at the same time they may have no desire to mislead.

Leeds, 1854.

THE COMMON GULL, (*LARUS CANUS.*)

BY JOHN DIXON, ESQ.

Seldom a year passes over, without some solitary specimens of this bird being either shot or observed about this inland district; but from all I can learn, they seem to be driven thus far from their "deep blue home," more by stress of weather than any foraging errand, being often noticed during the prevalence of east or north-easterly winds. When a gale is blowing from those quarters, a flight from Flambro', or any other place on the Yorkshire coast, would be performed in an almost incredible short space of time. At sea, they are wonderfully expert on the wing, and will tack, veer about, and make headway in a very heavy gale with admirable dexterity.

It is a beautiful sight to observe the graceful movements of our sea-birds at any time, but they are certainly seen to greater advantage during a storm, for when the sea is surging in full fury, they seem most active and at home. At such a time, grim Death is riding with them on the crested billows, and many a poor weather-beaten skipper, notwithstanding all his tacks and "ready abouts," is drawn to the fatal lee-shore, and there swallowed up by a roaring surf, with "all ocean for his grave."

The Common Gull is easily domesticated, and may be kept in gardens, where its services will be found useful. A person residing in Leeds, brought some young ones from Flambro' Head, which he has now kept some years; they have the run of a large yard, are fed principally on flesh, but will eat almost any sort of food; they associate with other poultry, seem very quiet in disposition, and will often stand for hours, sometimes on one leg, almost without stirring.

Immense numbers breed every year about Flambro', indeed during the summer months, the precipitous cliffs between Flambro', Bempton, and Speeton, are literally alive with a variety of birds. You may find Hawks, Ravens, Cormorants, Guillemots, Kittiwakes, Razor-bills, Puffins, and varieties of Gulls and smaller birds almost *ad infinitum*. You may often meet with young Guillemots swimming and diving about, but totally unable to fly; the fishermen say they get on to the old bird's back and are carried out to sea, when they speedily commence business on their own account. The story does not seem at all improbable, for if they attempted to leave the nest, they would inevitably be dashed to atoms on the rocks below. Last July, I was hammering about these chalk cliffs, and came suddenly upon two remarkably fine young Guillemots, quite unable to fly, and seemingly resting themselves during the ebb tide. They seemed terribly frightened at my approach, and made a ludicrous attempt to hide beneath a rock covered with long sea-weed; with some little difficulty, both were captured, and carried, screaming most lustily, to the water's edge; here I set them down, and felt glad to see them paddle off to their hearts' content. Many of these young sea-birds are esteemed good eating, particularly the Kittiwake, which is said to resemble a Partridge.

I have conversed with old people, who say they can remember the time when the birds were far more numerous than at present, which is probably correct; for their nests are continually robbed of eggs, and some *thousands* of birds must be destroyed in the course of a year. During the fine weather of July, August, and September, you may often see a regular fleet of cobbles out, each with its cargo of gunners; besides these, a steamer or two from Scarbro' will be occasionally cruising about. You may hear the murderous weapons pealing volley after volley, awaking a thousand echoes, and making the caverned cliffs boom and reverberate like distant thunder. I have stood on the edge of a precipice near four hundred feet above the sea, and seen the poor affrighted birds fly off by thousands and tens of thousands; some winging their way far out to sea, others again settling on the rocky ledges, where human foot could scarcely tread. It would be almost impossible to calculate the deadly havoc made amongst them, but it is sufficient for me to observe that a long and able article might be penned by some feeling heart in condemnation of the cruelty and wanton destruction here carried on; but as it forms no part of my present paper, I will conclude with passing two or three remarks on a place where a few days may be most agreeably and profitably spent. Flambro' must ever be a delightful spot to the lover of Nature, surrounded as it is with scenes of striking beauty and sublimity; it is indeed a happy sunny-looking place; where you meet with kind attention, good accommodation, and reasonable charges—three most important considerations for your vagrant sort of traveller. The ornithologist will here find an endless source of amusement, particularly if provided with a good telescope; the botanist will be rewarded with many rare plants peculiar to the district; the geologist has a wide field for study in the fossils of the chalk formation; and the antiquary will find a very ancient church without a steeple, containing a fine Norman font, a most elaborately-carved rood screen, some sepulchral brasses of Flambro's early lords, and a host of interesting minor details; while not far distant he may speculate on the ruins of the "Danes' Tower" and the earthworks about, rejoicing in the appellation of "Little Denmark." The celebrated ravine known as the "Danes' Dyke" is close at hand, while many tumuli may be found scattered about the district. There are few places possessing such goodly store of attractions; and a volume might almost be filled in illustration and praise of the "lions" of Flambro' Head.

Leeds, 1854.

SHORT NOTES FROM MY NOTE BOOK.—No. 1.

BY CHARLES H. DASHWOOD, ESQ.

Arrival of the *Hirundinidæ* in 1854.—The following are the dates on which these birds were first noticed in this neighbourhood:—

Swallow, (*Hirundo rustica*,) April 15th. Sand Martin, (*Hirundo riparia*,)

April 16th. House Martin, (*Hirundo urbica,*) May 1st. Swift, (*Cypselus apus,*) May 10th.

The Cuckoo, (*Cuculus canorus,*) was first heard on May 2nd.; on May 10th., I heard this bird singing shortly before midnight.

The Dipper, (*Cinclus aquaticus.*) During the severe frost in the early part of the present year, a pair of these birds were observed on a small river near this place, where they remained some weeks. They are by no means common in this county.

The Starling, (*Sturnus vulgaris,*) July 5th. To-day I found a nest of this bird containing three young ones lately hatched. Is it not an unusual thing for this bird to breed twice in the year?

The Missel Thrush, (*Turdus viscivorus.*) A few days since I saw one of these birds in the act of eating the egg of a Hedge Accentor. I was close to it at the time, and observed it most distinctly.

Garden Warbler, (*Curruca hortensis.*) Lesser Whitethroat, (*Curruca sylviella.*) Grasshopper Warbler, (*Salicaria locustella.*) I have never met with a single specimen of any of these birds in this neighbourhood.

Large Plane Tree, (*Platanus occidentalis.*) A fine tree of this species is growing at Beaupre Hall, in this county, which measures at three feet from the ground, thirteen feet eight inches in circumference.

The White Dead Nettle, (*Lamium album.*) This plant, so common in the western and southern parts of the county, is wholly unknown within ten miles of this place.

Thornage, Norfolk, July 13th., 1854.

NOTES ON THE NATURAL HISTORY OF MELBOURNE.

BY S. HANNAFORD, ESQ., JUN.

When I wrote you, some twelve months since, a few rough notes on the Botany of Victoria, it was my intention, from time to time, to contribute to your valuable publication, sketches of the natural objects met with in my rambles. Unfortunately, however, other avocations have prevented me from fulfilling my intentions, and allowed me only a few leisure hours occasionally to devote to the study of our native plants. I am the more anxious to send you a few lines *now*, for as civilization extends, so do I find the neighbourhood becoming less and less interesting to the Naturalist, from the decrease in number of all birds and insects, and the eradication of many of our beautiful wild flowers, with which on my first arrival here, the whole country was covered.

The Yarra banks, on which crept the small white purple-streaked Violet, (*Erpetion;*) the delicate pink *Gratiola;* the elegant *Lomaria;* and the drooping *Sida pulchella;* with a host of others even surpassing these in loveliness; are now covered with tents inhabited by quarrymen and wood-cutters, whose camp

fires have entirely destroyed every vestige of vegetation. It behoves me then to extend the range of my walks, and carefully to note everything of interest, lest it too may, ere long, share the fate of its congeners.

I may mention that I have an entomological friend here, Mr. F. C. Christy, cousin of the lamented W. Christy, so well known to all botanists, who accompanies me in my excursions, and much very agreeable information I have had the pleasure to receive from him.

Not to take up too much of your valuable space, I shall merely give you a few extracts from my note book, with some brief remarks on the vegetation of the Colony; at the same time wishing I could transfer to your pages a few rough drawings of various interesting objects I may have to mention.

Our spring commences about August, and the country is then one vast swamp from the heavy winter rains, and here it is we meet with some of the most beautiful of our native flowers. The ground is literally covered with various species of *Drosera*, (Sundew;) *D. Whittakerii*, (Planchen,) with radical, rosulate leaves (which impart a reddish dye to paper when pressed) and large white flowers. *D. Planchonii*, (J. Hooker,) figured in Hooker's "Icones plantarum," as *D. Menziesii*, from specimens found at Swan Foot, on the East coast of Van Diemen's Land; easily distinguished from other species by its long, slender, prostrate peduncles, and three leaves springing on slight peticles from one point of the stem; and *D. peltata*, (Smith,) also figured in the same work, Vol. i., Tab. 54, as *D. lunata;* from specimens sent from Van Diemen's Land, by Mr. Gunn. Leaves, alternate, those of the stem, peltate; radical ones, reniform, cordate. Flowers pink in terminal racemes. The exquisite little Star of Bethlehem, (*Anguillaria dioica*,) its white flowers circled on the interior with a band of brown, grows everywhere, in company with the yellow *Hypoxis vaginata*, and *Bulbine bulbosa*. The Lagoons in some places are mantled with the small flowers and floating leaves of *Ranunculus inundatus*, (Water Crowfoot;) and in others the *Azolla rubra*, (Marsileaceæ,) clothes their surface as with velvet. In moist situations at this season may be observed several *Musci*, as *Hypnum recognitum*, (Hedwig;) *Dryptodon Africanus*, (ferd. Mueller;) *Funaria hygrometrica*, (Hedwig.) A species of *Fimbriaria; Dicranum purpureum*, (Hedwig;) and the handsome lichen *Cetraria aculeata*, (Fries.)

A few weeks later and the *Orchideæ* spring up; and I may particularly mention *Diuris maculata; D. sulphurea; D. aurea*; *Caladenia carnea; C. cærulea; C. alata; C. pulcherrima; Pterostylis cucullata*, (Hooded Orchis;) and *Glossodia minor*. Of the *Asphodeleæ*, *Cæsia corymbosa*, with blue flowers and yellow anthers, is indeed a bright star.

The various species of *Acacia* are now splendidly in flower on the Yarra banks, emitting a most grateful perfume to the passer by. A great number of *Acacias*, and particularly, I think, *A. mollissima*, were completely denuded of their leaves this spring, by a small caterpillar, of a species of *Tenthredo;* and at the present time their bark is covered with a *Coccus*.

About September or October the *Riccinocarpus sidæformis*, which forms a dense shrub in some places, is in flower. *Melaleuca Gunnii*, (Tea-tree;) *Fabricia langata*, on which is often found a small fasces-shaped cocoon, *Dianella revoluta;* and in the grass pastures we find a host of small plants, so minute as to be scarcely perceptible but to the quick eye of the botanist. Of these perhaps the most interesting are *Aphelia pumilo; A. cyperoides; Desvanxia tenuior; Ranunculus sessiliflorus; Mitrasacme paradoxa; Marchantia polymorpha; Sebœa ovata*, valuable for its medicinal virtues, and in salt marshes near Brighton, the rarer *S. albidiflora*.

On the Yarra ranges, in October, I noticed a nest of the little Blue-headed Long-tailed Tit, in a bush of *Bursaria spinosa*. Instead of a compact, neatly built nest, like that of our *Parus caudatus*, it was composed of dried grass carelessly put together, with an aperture at the side; the bottom of the interior lined with a few feathers, on which were laid four or five white eggs about nine lines in length, tinged with pink, and spotted at the base with light brown spots. The male bird did not seem to fear whilst his nest was being examined, but, perched on a tree overhead, from which he could survey my operations, he kept up a sharp angry note until I left it; then after a strict scrutiny of the interior, he entered the nest to see that all was right there, and his joyful 'chit-chit-chit,' soon brought his anxious sober-coloured mate to his side.

This absence of all fear I have had experience of in the Kingfisher, which is so common on the Yarra. I was walking only a few evenings since in Richmond paddock, near the residence of our worthy Governor, C. J. Latrobe, Esq., intent on examining, and puzzling how to procure, the various beautiful species of *Loranthus*, which are parasitic on some of the venerable *Eucalyptideæ* and *Casuarinæ;* when I was startled by a Kingfisher darting at me with great fury, and uttering at the same time a loud scream. It occurred to me she had a nest near, and after a careful examination I heard the harsh cries of the young birds proceeding from a hollow branch of a very tall *Eucalyptus*. The whole of the time I was making my observations, the female flew at me many times in great anger; but as soon as I left the spot she returned to her nest, and soon quieted the young whose cries had betrayed them. This bird, although nesting in the *Eucalyptus*, procures its food in the same manner as our *Alcedo ispida*, and after immersing itself, and taking its prey, beats it against a branch of a tree to deprive it of life.

I have received from my friend, Mr. T. B. Hall, several very interesting Fresh-water Shells from the River Plenty; amongst others *Limneus pereger; Physa hypnorum;* and two species of *Cypris*.

November 30th., 1853. In company with my friend, Mr. Christy, walked to Dight's mill, a very beautiful spot on the banks of the Yarra, between Richmond and Heidelberg. On the bark of the *Eucalypti* we found some very beautifully-coloured species of Plant Bugs, (*Hemiptera;*) and a great variety of the *Ichneumonidæ*. Making our way with some difficulty through

the dense vegetation on the high Yarra ranges, above the lunatic asylum, we found very abundantly the *Nicotiana suaveolens*, with white flowers; and trailing along the banks, *Muehlenbeckia complexa*, (N. O. Polygoneæ,) which also climbed most gracefully amid the *Acacias*. Here, too, a beautiful *Billardiera*, with long, pendulous yellow flowers. Several varieties of the *Helichrysum*, (Everlasting,) ornamented the dry stony banks with their rich orange-coloured flowers; and as we rested by the river side to lunch, we observed foot-marks of the Opossum, Kangaroo, Rat, and native Cat. The Kingfisher uttered his shrill scream as he skimmed hastily up the stream; the Laughing Jackass startled us with his extraordinary cry; and the Bronze-wing Pigeon, ever and anon started up with a loud clap, clap, from clusters of *Rhagodia nutans*, on the fruit of which he had been feeding.

January 28th., 1854. Wind, north; thermometer, 93′, in shade at 8 A. M. By the sea-shore at St. Kilda, observed several specimens of the Spine-tailed Swallow, (*Hirundo caudacuta*,) an individual of which (a young bird) Mr. Christy shot at Richmond, from a flock of some hundreds, on December 30th., 1853. The following is a pretty accurate description, but we refer our readers to a plate of this bird in Morris's "British Birds," vol. ii., p. 86, taken from a specimen shot in England, on July 8th., 1846, in the parish of Great Horkesley, near Colchester, in Essex. Length, from tip to tip, seven inches and a half; expanse of wing, nineteen inches; upper side of wings, steel black. The back between the wings, dusky brown, approaching to buff; two last minor feathers of each wing, next to body, half white; back of head, and head, dusky black, with metallic hue. Rump, darkening until it reaches the tail, which is quite black; throat, dirty white, extending one inch and a half; tail feathers, ten in number, "the shaft of each feather projecting beyond the web, forming a row of spines about an eighth of an inch long from the middle feathers, and gradually shortening on the side ones." It is indeed an unaccountable circumstance, as remarked by the talented author of the "British Birds," why and wherefore this bird should have thus winged its way from so remote a part of the earth, our very Antipodes, to our Island; yet the length of the wings, and the rapidity of its flight, easily account for the "how," particularly when we recollect that our common English Swallow can with ease perform a journey of three thousand miles in three days,* and that this bird is able "to sustain itself in the air during the entire day without cessation."

On the sands noticed a Ray fish, which as far as I can remember is precisely similar to the Sting Ray of our British Seas. Yellowish olive above, with slate-coloured spots; under part white, with the exception of wings and tail, which are dirty yellow. The natives call it *"Stingaree,"* and believe, I need not say how erroneously, in its venomous powers.

Mr. Christy took, near Brighton, very handsome specimens of a large Wasp;—abdomen, barred with orange and black. And we noticed a spinous

* "Stanley's History of Birds, p. 91."

variety of the Parrot fish, (*Scarus,*) which has a peculiar mouth very like the bill of a parrot, and the jaws are so strong as to enable them to feed on shell-fish and corals, large numbers of which may be found in their insides. *A. Sepia,* (Cuttle fish,) was very abundant on the beach.

February 4th., 1854. In dry situations on the Yarra, near Dight's mill, took specimens of *Acheta campestris,* in the pupa and imago state. It is known here as the "Rain Crow," which name is also applied, in Virginia, to the Yellow-billed Cuckoo, (*Cuculus Carolinensis,*) from their being more clamorous before rain. On a plot of *Lucerne* Mr. Christy took a very beautiful *Colias?* somewhat like *C. Hyale,* (Clouded Yellow;) and a species of Water-flea, (*Gyrinite,*) numbers of which were performing their beautiful gyrations on the surface of the Yarra. Near the Yarra bend a great number of Crows were congregated, apparently very much annoyed by about twenty Hawks, very like our Kestrel, which were hovering about and buffeting them. They were much on the ground, probably feeding on the *Acheta.* On the *Eucalypti* and *Casuarina,* various species of the parasitic *Loranthus* were in flower. The surface of the Yarra was covered with *Potamogeton crispus; P. natans; P. obtusifolius;* and *Ottelia ovalifolia,* (Persoon;) and its margin clothed with *Mentha australis*; *M. gracilis; Senecio odoratus;* etc.

And here I believe I must end for the present, as I am much engaged in preparing for the second exhibition of our Horticultural Society, on the 28th., promising to write again on an early day.

Melbourne, Port Philip, February 20th., 1854.

Miscellaneous Notices.

Occurrence of Hoopoes near Plymouth.—On the 27th. of last month, Mr. Bolitho, of Plymouth, had a specimen of the Hoopoe, (*Upupa Epops,*) sent him for preservation; and on the 29th. another, both obtained in this neighbourhood. The person who killed the first saw others at the same time. I examined the stomach of one of these birds, and found it to contain a quantity of rather large short-legged spiders, of a purple brown colour. I might at the same time mention that a few days since, I opened the stomachs of two male Kestrels, (*Falco Tinnunculus,*) killed in the vicinity of Dartmoor. One contained a large sloworm, (*Anguis Fragilis,*) the other a sloworm and a lizard, but in neither were there any remains of mice or beetles. From this it would appear that reptiles form the chief food of this species during the spring and summer months in certain localities.—John Gatcombe, Wyndham Place, Plymouth, May 15th., 1854.

Note on the Cormorant, (Pelicanus carbo.)—Passing by Croxby Lake on Saturday last, I was surprised to see a Cormorant; one more species to be added to the list I forwarded some months ago, as visiting that locality. The Cormorant is rare in this part of Lincolnshire, but is now and then met with, generally resting, apparently after long journeys, upon elevated spots: the spire of a church is sometimes selected. Many years ago one fixed upon the pinnacles of Louth church; another the tower of West-Rasen for its abiding-place. After once or twice disturbing the visitor to Croxby, and watching his flight round the lake, I retired some little distance, and he commenced fishing, and I had the pleasure of seeing him, after a protracted dive, return to the surface with a tolerable-sized eel. The difficulty he had to manage his lively and slippery prey was very amusing; he frequently dropped it, but there was no escape. Once I expected that he had fairly gone; down went the eel, down went the Cormorant after him,

disappearing under the water—a last chance for the fish—but it would not do, he soon again rose with him. He gradually approached the shore, and I expected that he would have been obliged to land, to despatch him on dry ground. But he managed, I suppose, to get his head the right way, so down he went, (not, I think, a very pleasant internal companion.) For a short time, the Cormorant appeared uneasy, stretching out his neck, rising to his utmost height, as if balanced on his tail, gulping him down, but he succeeded at last; and my black friend composed himself, preened his feathers, ducked two or three times, shook himself, and returned to his fishing, at which employment I left him, having informed the keeper of the presence of the poacher.—Richard Alington, Rectory, Swinhope, May 22nd., 1854.

The Sky Lark, (Alauda arvensis.) I heard at two separate times the full note of the Sky Lark on Sabbath, 12th. February. The locality is very much exposed, lying in one of the most open parts of the Moray Frith. In some districts of the country there is an old saying with respect to the song of the Sky Lark, namely, "As lang as the liverock sings afore candlemas, (12th. February,) it greets (weeps) after it." I have given it in the vernacular dialect.—W. Maeduff, March 22nd., 1854.

The Ferns, etc., of Bawburgh Hill.—On April 5th., we took a stroll round one of our outlandish lanes, about two miles from our Hill; it is a very unfrequented one by most people, save workmen; as it only leads to fields and lands belonging to the surrounding farms. It is called Brammertye, or Brambletye Lane. With broad patches of waste ground in many parts, it is one, I doubt not, would well repay local botanists by a careful ramble round it; our object in selecting it now, was to search for Ferns, just breaking out most temptingly. Our first plant was a small evergreen, having been well screened by the shelving brambles and moss, the *Asplenium adiantum nigrum*. We had gathered several specimens of this on the south side of our Hanger, on March 29th. The Hound's Tongue, as here called, *(Scolopendrium vulgare,)* was very abundant; in many places it was growing in clusters. Several plants of the *Lastrea filix-mas* were found; and also a very beautiful one, an evergreen, of the *Asplenium Trichomanes*, with many young healthy fronds appearing; the spores were quite safe on the old ones, which had braved the winter. Mr. Moore, in his work on Ferns, says "It is a commonly distributed species throughout the United Kingdom and Ireland, growing on rocks and old walls; more rarely on hedge-row banks, where, however, it is more luxuriant." Certainly this was a fine plant—very elegant; I was glad to remove it; and it is now growing well. I knew of its location on Weston Church, about seven miles from our Hill, but I never found it so near home before. On the walls of our church we have the *Asplenium ruta-muraria*, but it appears to lessen considerably: as this spring it is showing itself only at *one small* patch of brickwork. In our ramble we found the Common Bracken showing a few fronds, and with this I close the present list of Ferns peculiar to the district of our Hill. We discovered in this lane a large bed, nearly fifteen feet long, of that delicate green flower, the Gloryless or Moschatel, *(Adoxa Moschatellina.)* We were struck with its beautiful cool appearance, which renders it quite fit for rock-work ornament. Its flowers are a very singular feature, being all at the summit of a long tapering stalk, and forming a square, with four of them surmounted by a fifth, which is the crowning decoration. It has an earthy but pleasant smell, when wet with dew. This is the only known locality around our Hill for this lovely pale green floweret of the woods.—G. R. Twinn, Bawburgh Hill, near Norwich, April 11th., 1854.

Early Entomological Captures.—In answer to your correspondent in "The Naturalist," of the 1st. inst., I beg to state that I captured the Small Garden White Butterfly on the 27th. March, Orange-Tipped Butterfly, 14th. April. Humming Bird Moth, 20th. Small Heath Brown and Wall Argus, 26th. I had some fine Emperors from the chrysalis, 11th. April; I have a singular cocoon of the Emperor Moth, it has an opening at each end, with the domes complete in each end. Small Heath Blue, one side male and the other side female.—T. F., Witney, May 6th., 1854.

Be it known to entomologists that specimens can be sent fresh by post in a light chip box, corked on one side, with a piece of wet sponge fastened on the other.—F. O. Morris, Nunburnholme Rectory, Hayton, York, August 7th., 1854.

Reviews.

The Natural History Review. Dublin: Hodges and Smith, Grafton-street. London: Simpkin and Marshall. Edinburgh: Johnstone and Hunter. Published Quarterly, Six Shillings per annum.

The "Natural History Review" commenced with the present year, and if we may judge *of the future by the past,* promises to be a valuable addition to our Natural History serial publications. It is a source of much gratification that it takes its origin in the Irish Capital, as we may hope that it will tend to foster a taste for Natural History in Ireland, where, although there are many bright exceptions, but few, comparatively, have turned their attention to the observation or record of facts in Natural History: indeed Ireland is usually looked upon almost as a *"terra incognitâ"* by Naturalists; and although this is not entirely the case, there is ample scope for abundant discoveries in every branch of Natural Science.

The reviews are well written, and from the amount of space at the disposal of the writers, a very good idea of the general tenor of the works reviewed is given to the reader.

In addition to the reviews, very copious reports of the meetings of the Natural History Societies, chiefly Irish, are given. We look upon this feature of the work with great interest, and anticipate that much valuable information will thus be brought to light, which previously, for want of some suitable medium, was mostly lost to the Natural History student.

We present our readers with the Table of Contents of the two first Numbers.

1.—"Reviews.—Rambles of a Naturalist on the Devonshire Coast. By P. H. Gosse.—A Flora and Fauna within living Animals. By Joseph Leidy, M.D.—The Natural History of the Birds of Ireland. By J. J. Watters.—Nereis Boreali Americana. By Professor Harvey, M.D. The Phytologist and Zoologist—1853. Proceedings of Societies.—Belfast Natural History and Philosophical Society—Oct. 26, Nov. 16, Nov. 30. Dublin Natural History Society—Dec. 9, 1853, Jan. 13, 1854. Dublin University Zoological Association—Oct. 22, Nov. 5, Nov. 19, Dec. 3, Dec. 17, 1853. Entomological Society—Dec. 5, 1853. Literary and Scientific Institution of Kilkenny—Dec. 9, 1853."

2.—"Reviews.—Norway and its Glaciers. By J. Forbes, D.C.L.—History of the Eastern Borders. By J. Johnston, M.D.—Popular Geology. By Joseph B. Jukes.—Himalayan Journals. By J. D. Hooker, M.D.—Palm Trees of the Amazon, and their uses. By A. R. Wallace. Proceedings of Societies.—Belfast Natural History and Philosophical Society —Dec. 14, Dec. 21, 1583; Jan. 25, Feb. 1, March 1, 1854. Dublin Natural History Society —Feb. 10, March 10. Dublin University Zoological Association—Jan. 21, Feb. 11, March 4. Literary and Scientific Institution of Kilkenny—Feb. 15. Notices of Serial Publications.—Annales des Sciences Naturelles. Annals of Natural History. Microscopical Journal. Zoologist. Phytologist. Hooker's Botanical Journal. Journal of Industrial Progress. Naturalist."

In conclusion, we heartily wish the "Natural History Review" a full measure of success; and indeed from the increased size of the second number, we trust, and may conclude that its projectors are satisfied with the progress already made.

The Cabinet of British Entomology, containing, in a systematic arrangement, carefully-coloured illustrations, and descriptions from Nature, of the most beautiful and interesting Native Insects. By C. Weightman Harrison. London: Simpkin and Marshall. Edinburgh: J. Menzies. Dublin: J. M'Glashan. Coloured Plates. One Shilling each Number.

The difficulties which necessarily attend the commencement of a work like the present, are very considerable, not so much with regard to the letter-press, as the execution of the engravings; for so little is usually known by our engravers generally, of Natural History, that they can hardly be made to comprehend the points to be attended to in delineating any animal or insect. These difficulties are evident in the first number, which contains the commencement of the extensive tribe of Coleoptera; but in the fourth, in which the larger water-beetles are figured, there is a very great and excellent improvement. If the succeeding numbers contain equally good figures of those which follow, as we have no doubt they will, we anticipate much benefit from the work. Its price places it within reach of the great bulk of entomologists, who have hitherto been debarred from possessing systematic works on their favourite subject, by the great price at which they were issued.

We trust the work now before us may induce many to commence a study of our native insects, the general arrangement of which they will find much facilitated by the "Cabinet of British Entomology." To give an idea of the useful nature of the work, we transcribe the following from the fourth number:—

Family—DYTISCIDÆ. Genus—DYTISCUS.—8 Species.

Character—*antennæ*, eleven-jointed, the first, or basal joint, longest, the second, shortest; *external maxillary palpi*, with the second and third joints equal, the terminal joint somewhat truncated; *head*, transverse; *scutellum*, distinctly formed; *anterior tarsi*, in the males, patelliform, spongy beneath; *intermediate tarsi*, in the males, dilated in their three basal joints.

The large size of all the species renders this genus of Water-Beetles a very conspicuous one. By means of their fringed legs they are enabled to swim with rapidity, and to dart suddenly upon their prey, which rarely escapes them; this consists of other insects, aquatic worms, young fishes, &c. The larvæ attain a length of about two inches; the entire body including the head, is divided into twelve segments, of which the three immediately behind the head are each provided with a pair of legs. The head is furnished with two short antennæ, and two powerful jaws. At the extremity of their body are two lateral appendages, by means of which they suspend themselves on the surface of the water, and thus absorb a supply of air for respiration. In changing their position, they strike the water with their tail, and at the same time impart a sudden vermicular motion to the body. When the period of their metamorphosis has arrived, they leave the water and bury themselves in the humid earth of the shore. It is stated by Rœsel, that the eggs of *D. marginalis* are, during summer, hatched in from ten to twelve days, that in fifteen days the larvæ enter the pupa state, and at the end of fifteen or twenty more, become perfect insects.

Fig. 1.—*D. conformis. The Large Alike-formed Water-Beetle.* Head, olive, the anterior margin reddish brown, and a rather deeper red triangular-formed blotch on the forehead; thorax, dark greenish olive, bordered with ochreous yellow, finely punctulated, the anterior margin dotted with a row of minute impressions, the posterior margin sinuous; elytra, dark greenish olive, margined with ochreous yellow, finely punctulated; each elytron with three faintly formed lines of minute impressions; antennæ and legs, pale ochreous; body, ochreous yellow beneath, the sutures of the breast, and segments of the abdomen towards

the base, black; hinder coxæ, acute. In both sexes the elytra are almost alike smooth, those of the female being but slightly marked near the base with the rudiments of channels. Captured in ponds in Devonshire, Suffolk, Cambridgeshire, and Huntingdonshire. Not common.

In addition, however, to the descriptions of the insects and their habits, Mr. Harrison gives much interesting entomological information, under the head of 'Entomological Notes and Proceedings,' being a short summary of the proceedings of the Entomological Society. The Work is expected to be completed in six or eight volumes, each of which will be complete in itself. We wish the Editor every success in his arduous undertaking.

Proceedings of Societies.

Entomological.—July 3rd. E. Newman, Esq., President, in the chair.

Mr. Stevens exhibited a living larva of the rare *Notodonta Carmelita*, reared from the egg, and now full grown. He also exhibited a specimen of the rare beetle, *Damaster Blaptoides*, from Japan; this being the fifth known in Europe.

Mr. Waring exhibited several insects which had been found dead and covered with a tough film, apparently of a fungoid nature.

Mr. Janson exhibited several scarce insects lately captured in Scotland by Mr. Foxcroft; and several interesting species taken on the occasion of the Society's excursion to Darenth Wood, on the 17th. of June.

Mr. Stainton exhibited specimens of the new British *Anthrocera Minos*, taken near Galway by A. G. Moore, Esq., and forwarded for distribution among the members.

Mr. Douglas exhibited a new *Lithocolletis*, reared from larvæ in leaves of *Vaccinium Vitis-Idæa*, sent from Scotland by Mr. Weaver; also *Parasia Metzneriella*, reared from the larva in the receptacles of *Centaurea nigra*.

Mr. Smith exhibited specimens of the very rare bee, *Nomada armata*, taken by Mr. Dossetor near Swansea; also a new British Crabro, and a male of *Tenthredo cingulata* from the same locality.

Mr. Stevens exhibited a new British beetle, *Pyrochroa pectinicornis*, recently taken in Scotland by Mr. Buxton.

Mr. Waterhouse read a paper "On the Species of Amycterus and allied Genera of Colcoptera, with Descriptions of some new Species."

Mr. Westwood read "Descriptions of some New Paussidæ in the Collections of Messrs. Dohrn and Boheman." He also read "Notes on Various Insects," by Mr. W. Varney.

Mr. Stevens read an extract of a letter from Mr. Wallace, informing him of his safe arrival at Singapore; where in a few days he had captured two hundred and fifty species of insects.

The Querist.

Would you, or any of your numerous correspondents, kindly inform me whether it is a correct notion that in summer the *Aphis* breeds oviparously, and in the autumn, viviparously. Dr. Mason Good having asserted that at different seasons of the year the *Aphis* breeds both ways. At what ratio also do you believe the female *Aphis* breeds? I am anxious to be set right on these points, and any answer will be read with much pleasure should you deem this communication worthy of insertion in your valuable magazine.—T. J., Tottenham, June 16th., 1854.

In answer to the inquiry whether there be not some method of taking the impression of Butterflies' wings on paper, I beg to inform you that by putting a solution of gum over any kind of paper, and pressing the wing upon it, you have a most perfect representation of the wing and all its colours.—C. G. Lenny, Ramsgate, 1854.

Seeing in "The Naturalist," of this month, under the head of "The Querist," a request

from you for information as to some mode of taking the impression of the wings of Butterflies, I beg to give you the particulars of a very simple method I have adopted, with moderate success, for the last twelve years. I use any ordinary smooth-surfaced letter paper to take the impression on; I then keep ready prepared some of the clearest gum-arabic in solution. All the implements I use are a pair of fine-pointed scissors, a pair of fine-pointed pincers, and a piece of flat transparent horn, (the side of an old lantern.) As soon as I have caught my Butterflies or Moths I kill them, to prevent the least loss of down; I then cut off the wings close to the body and lay them on a piece of paper beside me, when, having various sizes of paper ready cut, I select a piece as large as necessary, and give it a single coat, (but only over as much space as the wings are likely to cover,) of clear gum. I then immediately proceed to arrange the wings, outside downwards, on the wet gum, taking care to place them at once in their proper position, as it will not do to move them after they have once touched the gum: in handling the wings I use the pincers entirely. As soon as the wings are arranged, the upper ones first, and the under ones lapping over them as they do in nature, I place the flat horn on them and press them with my thumb or finger for a few seconds, but not long enough to allow the paper to stick too close to the horn. I then remove the horn, bend the paper a little back, when the wings will in most cases spring off the paper, but perfectly bare on that side, having left all the down on the paper. When dry I remove the gum with a brush and clear water wherever it shows beyond the impression, so that the paper may look clean: preserve the body to be copied in with a paint brush afterwards. I use horn to press with for several reasons;—it can be wiped clean between every operation;—you can see if the wings are lying smooth whilst pressing, and it will not break with pressure. If I take off a white specimen I use slightly tinted paper instead of white, that the impression may be seen. Large specimens are best left dead for two or three days to allow the juices to dry, else, when pressing, a yellow liquid will squeeze out and soil the paper. Specimens that have been dead for some weeks will not answer, as the down becomes so dried on to the wing that it will not come off. Old specimens from a collection I can never succeed with. You will remark that the colours and markings are not so bright as in the original, because the portion exposed to view is not the original surface, but the underneath of the down which is fixed to the wing. I enclose you a specimen which has been done for three or four years, the body, and in fact every thing but the wings, is painted. If this proves any use to you I shall be very glad, as I have derived so much pleasure from your three works on "Birds," "Eggs," and "Butterflies," that I consider I am only repaying a debt of gratitude by endeavouring to afford you any information.—Arthur Havers, Tenterden, Kent, in a letter to the Rev. F. O. Morris, July 1st., 1854.

The following method of taking impressions of Butterflies has been practised with much success:—Cut off the wings of a Butterfly, and lay them upon clear paper, in the form of the insect when flying. Spread some clear thick gum-water on another piece of paper, and press it on the wing; the little coloured downy substance will adhere to it; then lay a piece of white paper upon the top of the gummed paper, and rub it gently with your finger, or the smooth handle of a knife. A perfect impression of the wings will thus be taken. The body must be drawn and painted in the space between the wings. I cannot conclude without thanking you for the pleasure which I, in company with every lover of natural objects, derive from your beautiful works on "Birds," "Butterflies," and "Eggs," the latter are especially beautiful, and quite indispensable to every oologist.—H. Smurthwaite, Frenchgate, Richmond, Yorkshire, in a letter to the Rev. F. O. Morris, July 8th., 1854.

In answer to your query in "The Naturalist," for this month, I have taken several objects by means of albuminized paper; I saw a specimen taken from the weed itself, *Ptilota plumosa*, it is a negative and can be easily printed from: please return it. Wings of Butterflies and Moths can be equally easily taken. I use albuminized paper, which is to be washed over with a solution of nitrate of silver, thirty grains to the ounce; it is then dried and the object to be copied is laid on it and exposed for a few moments in a pressure frame. I obtained every thing necessary from Horne, Thornthwaite, and Wood, 123, Newgate Street, London. If you write to them they will send you their book on "Photography," price one shilling, which explains the subject very well.—William Thompson, Weymouth, in a letter to the Rev. F. O. Morris, July 3rd., 1854.

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Communications have been received, up to September 18th., from W. T. Lane, Esq.;—T. S. Tinker, Esq.;—A. D. Mather, Esq.;—J. E. Daniel, Esq.;—Mr. T. Edward.

Contributions have been received, up to September 18th., from Mr. T. Edward;—Miss Cameron;—W. R. Robertson, Esq.;—A. D. Mather, Esq.;—E. Simpkin, Esq.;—C. E. Smith, Esq.;—S. P. Savill, Esq.;—Mr. E. Parfitt; E. M. A.;—G. R. Twinn, Esq.—J. Longmuir, Esq., Jun.

Will E. M. A., of Manchester, favour us with his name in confidence?

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THE DOMESTIC CAT, (*FELIS CATUS DOMESTICA.*)

BY JAMES SCRYMGEOUR, ESQ.

A PARAGRAPH among the 'locals' of our paper of this day, sets forth an instance of a Cat, which its master banished to the other end of the town, finding its way back on the following morning—a very curious fact to be sure, and worthy of note—but it is by no means an uncommon one. I have heard and read of numberless instances of a similar kind. I may mention one which never has yet been stated in print. The Rev. Mr. Mearns, Wesleyan Minister at Perth, while a missionary at Guy's Hill, in the Island of Jamaica, had a beautiful Cat, which he wished to give as a present to Samuel Rogers, Esq., of Louisiana, which is situated fully six miles farther on among the mountains, by wild and dangerous roads. The feline gift was accordingly tied into a bag, and taken to Louisiana, and duly liberated there, in the hope that it would make itself at home. The Cat never was away from Guy's Hill in its life before, and could not possibly have seen the trees, rocks, or any other objects which marked the route between Guy's Hill and Louisiana, and yet next morning it was back at the Mission-house at Guy's Hill, purring at the feet of her astonished master and mistress.

But to come nearer our own "great River Tay." A gentleman living in Bank Street got a Cat from Claverhouse—three miles distant I should think. This Cat, though kindly treated, would not stay, and, as it is supposed, found its way out at a window in the roof of the house, and without any lessons on longitude, returned to its former home. Some years ago, a person in Kirriemuir, wishing to get rid of his Cat without drowning it, gave it in charge of a carrier going to Montrose, who turned it adrift near the city of Brechin, nearly twelve miles away, and thought it "all right," so far as the intention was concerned. But not so, Puss was back to its home in Kirriemuir before night.

While on the subject, I may as well mention what may either be called a remarkable instance of feline intelligence, or a curious coincidence. In the summer of 1850, while living in lodgings on the other side of the water, at Figtree Cottage, Newport, I was asked one day by Dr. Greig, the present demonstrator at the Royal College of Surgeons, Edinburgh, then a student, spending his vacation here, to bring over some frogs, alias padocks, with me, for the purpose of subjecting their feet to the microscope, which beautifully shows the circulation of the blood. I mentioned the matter to my landlady, with the view of eliciting from her the likeliest locality for capturing a few. During our conversation on the subject, the Cat of the house, which was present, appeared to listen; but whether it did understand us or not, I shall not pretend to say; but of a surety it did go out of the room, and in less than ten minutes, even while we were yet on the subject, it did return, bringing a large toad with it in its mouth, which it dropped down at the feet of its mistress, and looked up as if it had done its duty, and deserved

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something nice for supper. The toad certainly was not just exactly the animal I wanted; but so very like that, we must hold if it be not a coincidence, that it was a mere scientific inaccuracy, the Cat not just being able to distinguish more than many bipeds in the division *Batrachia*, between the genus *Rana*, to which the frog belongs, and the genus *Bufo*, in which the toad is classified!

I know a Cat in the centre of the town, belonging to a certain lone widow woman, who shuts up her house on Sabbath. The Cat, a social sort of creature, does not appear to relish Sabbath life in the house of her mistress, and therefore regularly leaves it of her own accord, on the Saturday night, for the house of a well-known gentleman, and there remains over the Sabbath, punctually returning home on Monday morning. I know another Cat, belonging to a farmer in the parish of Cortachy, which often follows her master far a-field like a Dog, and springs on his shoulders on the appearance of danger.

Watt Institution, Museum, and Library, Dundee, July 5th., 1854.

A GLANCE AT THE FEATHERED RESIDENTS IN, AND VISITANTS TO, THE GROUNDS OF TERRICK HOUSE; WITH A FEW REMARKS FROM PERSONAL OBSERVATION UPON THEIR HABITS AND PECULIARITIES.

BY STEPHEN STONE, ESQ.

(Continued from page 102.*)*

Lower down, and within about four feet of the ground, some mortar has fallen from a lath and plaster partition, disclosing an aperture between the laths but just over three-eighths of an inch in width; if we introduce a small stick into this aperture, a hissing sound from within will greet our ears; we shall moreover receive, not an electric shock certainly, but something akin to it, caused by a smart blow upon the stick from the beak of the Blue Titmouse, (*Parus cœruleus*,) who happens like a good Housewife to be where she ought to be, at home, and not idly gossiping with a neighbour, but earnestly engaged in the discharge of domestic duties. We look about if haply we may discover some larger aperture, doubting whether it be possible for the bird, small as it is, to pass in or out through this one; no other however is to be found, and we are constrained to believe that through this aperture it actually does force itself; and if we station ourselves within view when the period of incubation has passed, and it has a family to provide for, we shall have ocular demonstration of the fact; no wonder that our credulous ancestors, on witnessing a feat of this sort, should also be impressed with a belief in the possibility of witches entering apartments, or making their exits therefrom through key-holes. I wonder whether our tight-lacing Misses have an idea that with proper training they will some day be able to rival these latter-named worthies in the performance of this feat; I trust

that, train themselves as much as they please for the purpose, they will never be able to accomplish it, though I must confess it appears somewhat problematical, judging from the slenderness to which it seems possible to reduce the human frame, a distortion which, however it may cause them to be admired by dandies, fops, and coxcombs, will never, they may rely on it, render them objects of greater regard, esteem, or affection, among sensible people, whose admiration is alone worth caring for. Could they but be persuaded to lay aside this most pernicious habit, they would feel themselves infinitely more comfortable, would enjoy infinitely better health, and consequently be far better able to discharge the various duties of life, and we should moreover be blest with their society in this lower world for a greater number of years; for that hundreds are prematurely cut off and consigned to the tomb in the very flower of their age, from this practice alone; and that it is the primary cause of lingering, painful, and often incurable disease to thousands in more advanced years, scarcely admits of a doubt.

The nest of the Blue Tit varies in the quantity of materials, according to the size of the hole in which it is placed; it is sometimes a vast accumulation of green moss, with a thick bedding of cow-hair. The eggs vary in number from seven to thirteen or more; they are white with numerous specks of pale red; some are more faintly as well as more sparingly marked than others. The industry of the parent birds is rather heavily taxed during the period they have their family to provide for; the war they then wage with the caterpillar tribe, with which this family is principally, nay, as far as my observations go, entirely supported, and the good service they consequently do us in ridding our fruit trees and shrubs of thousands of insidious bud and leaf-destroyers, ought to be as the seven-fold shield of Ajax to them in protecting them from harm; instead however of this being the case, the very fact of their being seen in our gardens in search of these creatures, brings destruction upon their innocent heads from those upon whom they are conferring great and gratuitous benefits; but who, unobserving as they are, obstinately and blindly persist in accusing them of destroying those very buds they are most assiduously engaged in preserving from destruction. They are very fond of picking a bone, and have a great liking for suet and fat meat. Butter is an article in especial favour among them; I generally place a small portion at breakfast time outside the window of the breakfast room, which is regularly shared in by two or three Redbreasts, a couple of Great Tits, and four or five Blue Tits, who all seem instinctively to know the breakfast hour, assembling with great regularity about that time.

The talented and observant Editor of "The Naturalist," Dr. Morris, has recorded an instance of his having heard this bird sing sweetly; another instance has since been recorded by the equally talented and observant Author of "A History of British Birds," the Rev. F. O. Morris. This is a pleasure I have never yet enjoyed, but I do not now despair of obtaining it some day: were this pleasing accomplishment to become general among the species,

it would add still more to the attractiveness of a bird, whose unrivalled beauty of plumage, and sprightliness of disposition, to say nothing of the eminent services it renders us, ought even now to give it an high place in our favour.

Like some other species these birds will, if unmolested, bring up their family in the same hole year after year; they also occupy this hole as a roosting place throughout the winter.

Most birds appear to take infinite delight in bathing; nor is the Blue Tit at all backward in this refreshing and health-preserving exercise; it performs its ablutions frequently, regularly, and (weather permitting) at all seasons: I have often watched it at the close of a short winter's day, taking its bath with evident enjoyment, just before retiring to roost; and from repeated observation it would seem to be in the constant habit of doing so.

Close at hand, among the ivy, we discern a bunch of dry brown leaves, with here and there the skeleton of one, which on a nearer inspection we find forms the outer portion of the nest of the Redbreast, (*Erythaca rubecula.*) If for the purpose of satisfying our curiosity as to the contents of the nest, we cause the owner to vacate her seat, a cry, low, wailing, and plaintive in the extreme will presently be heard—a cry so full of mournful sadness as to go to the heart of the hearer, its frequent repetition generating a feeling of pain from which he is glad to escape. On looking into the nest we are astonished to find five pure white eggs, smooth and glossy as those of the Wryneck: we ask ourselves can these be 'bona fide' eggs of the Redbreast, so widely different from those usually produced by that bird? The presence of the owner of the nest assures us that such is the fact. I have met with several nests of this bird containing eggs of this character, and some equally strange varieties. This is one of the earliest birds to begin nesting. I have known of a nest in the month of January, and I have at times met with it throughout every succeeding month till August.

In front of this summer-house stands a yew tree, near the extremity of one of whose branches, and at an elevation of some eighteen or twenty feet, a nest is seen, which at the distance we are below, we cannot at all make out: on ascending to it we are somewhat surprised to find it to be the domed nest of the Common Wren, (*Troglodytes vulgaris;*) probably it had been driven to select this elevated and rather uncommon site, for I have only met with two instances of the kind, from having had its hopes repeatedly crushed when a more lowly situation had been chosen. Nests of this species are to be found in a great variety of situations:—In a stump on the hedge-bank, close to the ground; worked in between the stems of the ivy which adorns the wall, or which begirts the hedge-row or forest tree; in the midst of a thick hawthorn bush, or quick-set hedge; in a dead fence; in the side of a hay-rick; high up in the interior of the thatched roof of barn or hovel; and in a vast number of situations besides.

We often meet with instances of this bird building, or partly building

several nests before it finally settles down into one; this may arise not so much from fickleness of disposition, as from its having discovered after having begun, or after having completed a nest, that some secret danger was lurking about the neighbourhood, which drove it to the abandonment of the spot, and caused it to look out for a fresh situation, so that, that which might, on a superficial view being taken, have an appearance of fickleness, will, on searching deeper, be found to proceed from that principle of love for its offspring, an All-gracious Creator has implanted in the breast of every creature, which aroused, leads to the preservation of the species.

This hardy little bird is another of our permanent residents, braving the severity of our most rigorous winters; nor does it appear to suffer much from the effects of cold. I have heard it pour forth its song with an energy for which this species is remarkable even in the middle of a rather severe frost. When hill and valley, forest, field, and grove, have thrown off the gorgeous livery with which they were adorned in spring and summer; when the splendours of autumn have departed, and the golden hues and varied tints the leaves at that season displayed, have vanished away; when the once smiling face of nature is veiled in frowns, and the genial shower and gladdening sunshine have given way to tempest, storm, and gloom; when the chill wintry wind comes in blasts from the north, and the earth is inwrapped in its mantle of snow, it is extremely interesting to watch this little creature, as it may often be seen round the margin of the pond or stream, now creeping like a mouse among the tangled roots, or into the cavities, which occur in the overhanging banks, unmindful of the avalanche which is impending and threatening to overwhelm it; now safely emerging and hopping fairly out upon the ice-bound and snow-bestrewn surface, and ever and anon even here picking up, or seeming to pick up a stray insect or food of some kind. It may also be seen in the interior of barns and other out-buildings in search of spiders; nor does it enter these buildings by stealth, as the Sparrow in search of grain is obliged to do, if it enter at all, and in severe weather when insect food becomes scarce, it is sometimes driven to make the attempt, but it enters boldly and fearlessly; you may be standing within a yard or two of the aperture through which it enters, it takes but little notice of you, but proceeds calmly in its work of exploration. The obvious reason of the marked difference there is between the 'entree' of this bird and that of the Sparrow, is, that the latter is subjected to constant persecution, from which the former is happily exempt, at least comparatively so, most children being brought up to regard it, with the Redbreast, Martin, and Swallow, as a sacred bird.

It likes to have a snug and comfortable "berth," wherein to pass the cold and stormy nights of winter; sometimes a nest, constructed,—it may be with this definite object in view,—late in the previous summer, is resorted to; and sometimes a hole in the side of a hay-rick is selected for the purpose, into which I have occasionally found feathers introduced, in order to render

it warmer, and more comfortable; and, still further to increase the warmth, several individuals will sometimes be found roosting together.

I have heard this interesting little creature, on its escape from a calamity which threatened it, the attack of a cat, break suddenly out into a hymn of thanksgiving and praise, for what else could the burst of song be? in grateful acknowledgment of its deliverance. And when dangers are averted, and calamities mercifully warded off from us, does an involuntary burst of gratitude and thankfulness escape us too? Are we equally ready with this little bird, to offer up our tribute of praise for mercies received, for blessings bestowed upon us? If not, even it may one day rise up, and its voice be heard in judgment against us.

Suspended from near the extremity of another branch, a small ball-like object is seen, which we find to be the nest of the Golden-crested Wren, (*Regulus cristatus.*) The close, compact nature of the foliage which feathers the branch beneath which it is hung, serves as an awning to protect its occupants from sunshine and from storm, for, unlike the last, this nest is open at the top. It is a perfect gem in its way; the hammock-like way in which it is slung up commands our admiration; while the slender thread-like shoots which hang gracefully about it, and to which it is ingeniously and securely lashed, combined with the neatness of finish, and elegance of shape of the nest itself, render it an object extremely beautiful and interesting. The line from the nursery rhyme,

"When the wind blows the cradle will rock,"

naturally enough suggests itself on viewing this tiny piece of architecture, neither the bulk nor weight of which, however, will be at all likely to bring about the catastrophe shadowed forth in the succeeding line—

"When the bough breaks the cradle will fall."

A spruce fir or yew tree is generally selected, and the nest is usually placed at an elevation of from ten to fifteen feet, but I have found it in a low juniper bush about four feet only from the ground; I have also found it in an apple tree, and in one instance I met with it in a beech, in the midst of one of those almost impervious and singular-looking boughs we sometimes find in that and other trees, but in the beech especially. These boughs have much the appearance, at a distance, of a Magpie's nest suspended in the tree; their strange formation is most likely caused by the puncture of an insect, or is the effect of some peculiar disease. The tiny eggs of this tiny species I have usually found to be seven or eight in number, of a dull white, suffused at the larger end with pale yellowish brown, varying in the depth of tone; some specimens have this colour disposed in distinct specks. A nest with seven eggs was this year found at Cokethorpe Park, as early as the 14th. of April; the end of the month, or the beginning of May, is the more usual time for this bird to begin laying.

Although partially migratory, this species braves, and that with impunity,

the severity of most of our winters, nor does it, so far as my observations go, seek the shelter of hay-rick or thatch, in which to pass the nights, as does the Common Wren; those same evergreens which furnished it with a supply of food throughout the day, no doubt affording it sufficient protection from cold during the night. That these birds find an adequate supply of minute insects, even during a severe frost, I have had satisfactory evidence, for in the depth of a rather long continued one, a specimen was caught and killed by a cat, which on examination I found to be in the best possible condition; its gizzard was completely stuffed with small flies, etc.

The hill sides around are studded with that neat-looking, but sombre-tinted evergreen, the common juniper, while hanging woods of box of considerable extent are here and there to be seen, which not only contrast finely, in winter, with the gray, cold beech woods with which these hills (the Chilterns) are likewise clothed, thus relieving in a charming manner the dreariness of a wintry scene, but are also valuable in affording shelter and protection to the feathered tribes. Here as winter approaches a large addition to the number of Goldcrests, permanently resident, takes place, those which had been reared in more exposed situations being driven to seek the shelter these woods offer them.

The Song Thrush, (*Turdus musicus*,) has a nest between the forks of this tree; the lining of this nest is of a most peculiar kind, widely different from that of any other British Bird's nest. Most birds choose materials for the purpose more or less soft, warm, and yielding; but the bird before us disdains to allow itself, or to bring up its offspring, in the indulgence of any such luxuries; the inside of the nest being coated over with a kind of adhesive cement or plaster, of the composition of which nothing very satisfactory seems to be known. One ingredient, however, appears to be that light, decayed wood, known as touchwood; what else there may be, or what kind of fluid the bird may employ for mixing the ingredients together, is not so apparent: whatever the mixture, it forms, when dry, a cement hard, firm, and durable, though extremely light. The eggs, five in number, are of a beautiful blue, with black or purplish spots. I have some of a uniform blue, without spot or stain of any description; these are of a darker hue than usual, as though the black or purple colour, which in ordinary cases exhibits itself in distinct spots, were in these particular instances mixed up and blended with the ground colour. I have found the nest of this species with eggs as early as the month of February, and I have known of a nest with young ones as late as the first week in September; it would therefore seem to breed more than once or twice in the course of a season. The early nests are generally placed among ivy; in a spruce fir tree, or evergreen shrub; in the side of a bean rick, or faggot stack; on the side plate in a cart hovel, or any open shed; and especially among the brushwood which is cut and laid in drifts by the woodman, previously to its being made into faggots. As the season advances, and the opening buds expand, places of concealment are no

longer "like angels' visits, few and far between," but become general, and then nests of this species may be found in every hedge-row. I once met with one placed inside a hollow tree, access being gained by an opening in the side; the nest was supported by a briar which chanced to be growing there.

In lengthened periods of drought, as well as in long continued frosts, these birds, in common with other species which subsist chiefly upon worms and other moisture-loving creatures, find their resources in a great measure fail; worms having penetrated to a sufficient depth to be out of the reach of drought on the one hand, and of frost on the other, are consequently far enough out of the reach of their feathered enemies; while snails have laid themselves up in hidden and secret places, have retired within their shells, and those shells are as it were hermetically sealed. It is to these the attention of the Song Thrush is directed, they are diligently sought after, and when found are conveyed to some convenient stone, against which, by repeated hammerings, the shell is broken and the body of the creature extracted. An immense quantity of broken shells may sometimes be found around a stone used for the purpose; affording good proof that the Song Thrush is a staunch friend to the Horticulturist, and, as such, ought to meet with protection and encouragement.

Close by, in a box tree begirt with ivy, we find the nest of the Blackbird, (*Merula vulgaris.*) This nest is more bulky and heavier, as well as heavier looking, than the last; the lining consists of coarse grass, with moss and dry leaves. The eggs, generally five, sometimes, but rarely, six, are of a dull greenish ground, freckled or clouded with various shades of brown; there are many varieties both in size and colour. I met with a nest this year in Cokethorpe Park, containing five eggs, one of which was of the fine blue of the Song Thrush's, without spot or stain; three of the same ground-colour, with a few indistinct markings; and the remaining one freckled over the blue ground with the usual colouring. The situations chosen for the nest are very similar to those selected by the Song Thrush, but, as a general rule, they are placed nearer the ground. I have, in numberless instances, in woods, found them resting upon it, or at least upon the stump of a felled tree level with it. It does not generally go to rest so early as the Song Thrush, nor does it, so far as I have observed, continue breeding so late in the season.

There are but few birds, on a comparison with which, the Blackbird will suffer. Its beautiful jet black plumage, admirably relieved by its bright orange-coloured beak and eyelids, when seen hopping across the snow-covered lawn, and fearlessly approaching, as it will do when unmolested, the drawing-room windows, in anticipation of sundry dainties with which it is wont to be regaled; renders it an object which no one can see without admiring. And then its notes, rich, soft, and mellow, as it pours them forth in the sweet spring time, cannot be listened to without their exciting a feeling of unmixed pleasure. Who so selfish as to deny this bird a small portion of his fruit, in return for the pleasure its appearance and song give him; especially when it is borne

in mind that throughout the greater portion of the year it derives its chief support from those insatiate foes to fruit and vegetables—slugs, snails, and the larvæ of insects, immense numbers of which it must of necessity destroy.

(To be continued.)

THE GRAY HERON, (*ARDEA CINEREA.*)

BY HENRY MOSES, ESQ., M. D.

MANY of us delight in studying the habits of particular birds. The Gray Heron has ever been a favourite of mine. I like him for the wild, romantic, and solitary sort of life he leads. He may be called a meditative bird, this Gray Heron of ours—the last of a tall race who once peopled our fens—Lord Paramount of the marshes. His near relative, the Little Night Heron, has long since disappeared, and all we know of the Egret, the Spoonbill, and the Bittern, as inhabitants of Great Britain, and companions of his ancestors, is from books, or occasional reports we hear of such and such strangers being shot by Sir somebody's gamekeeper, in some out-of-the-way locality. I never see my lonely friend standing motionless upon one leg by the margin of some rushy pool, with his neck retracted, and his powerful bill resting upon his sternum, but I fancy I can almost divine his thoughts and read his meditations. Is he mourning over the speedy extirpation of his race? When stationed thus, for hours at a time, I believe our Gray Heron is not always intent upon watching what is passing in the water below him. I believe he is given to napping, for he has frequently allowed me to walk close upon him before he was fully aroused to a sense of his dangerous situation, or thought proper to 'move on.' We must not forget that our friend is nocturnal in its habits, and angles much on moonlight nights, so we can pardon his day drowsiness. The Barn-door Owl, I suspect, could tell us about these wanderings of his. The Gray Heron is always alone. The Snipe and the Teal occasionally may keep him company in severe weather, but they like not his hunting ground, and are soon away back again to the purling brook of the mountain, where there is less to fear from their common enemy, man.

About four miles from St. Asaph, at Bodryddan, the seat of William Shipley Conwy, Esq., there is a very large heronry close to the mansion house. The generous and much-beloved proprietor of this fair domain has taken no common interest in the protection and preservation of this rare colony of Herons. It is enough to say they are allowed to bring up their children undisturbed by the genus homo. Blessings shower upon him and all who delight in preserving for the gratification of the naturalist the beautiful birds of our own fair land. It may appear singular that so timid and shy a bird as the Gray Heron should have selected so frequented and public a place for the rearing of their young. Doubtless time has given them confidence in their protection, for here they annually resort during the breeding-season, and famous

large nests do they build in the fine old elms, which have sheltered the antique mansion for many a half century. The quantities of fish which these birds bring from the River Clewyd, two miles off, is really astonishing. Every half hour may one of them be seen slowly sailing towards his nest with some aquatic capture in his mandibles, and then, what a noise, what a snapping and gobbling do the hungry expectants make!

The steward informed me that he was seldom at a loss for a dish of fine fresh trout after the young ones had been hatched, for both parent and child were so awkward about the feeding, that nearly half the food they brought was dropped from the nests and lost. During my last visit, for I have paid many at this season, I could have collected in a very short time from under the trees a handsome pannier full of trout and flounders. Broken green egg shells lay scattered about, and the very air was tainted with the aroma of putrid eels, strangulated frogs, and decayed shrimps and shell-fish.

Appleby, Westmoreland, 1854. *In a letter to the Rev. F. O. Morris.*

ORNITHOLOGICAL NOTES.

BY G. B. CLARKE, ESQ.

Occurrence of the Guillemot, (Uria troile,) *at Fenny Stratford, Bucks.*—On the 13th. of November, 1852, during the heavy floods which then prevailed, I had a Guillemot brought to me, which had been caught in the river at Fenny; it was a male bird, and very poor; there was another seen at Simpson the next day, but it escaped.

Gray Phalarope, (Phalaropus lobatus,) *at Hockliffe, Beds.*—One of these interesting and rare little birds was shot at Hockliffe on September 30th., last; its quick movements while in the water attracted the attention of the party who shot it, who was also surprised that it was so tame;—it allowed of a very near approach without exhibiting any signs of fear.

Ring Ouzel, (Turdus torquatus,) *in Beds.*—The occurrence of the Ring Ouzel in Beds. is of rare occurrence; I believe only once before recorded, and that in the winter. This bird was shot on April 25th., at Woburn Sands, in the garden of W. H. Denison, Esq., by whom it was killed, he thinking it was a singularly-marked Blackbird. I think there is very little doubt but what it had a nest there; it is a male bird, and in excellent plumage.

Nest of the Redpole, (Linaria minor,) *in Beds.*—As I do not perceive that there is any record of the Redpole nesting in this county, I send this partly because the nest is somewhat differently constructed to the one mentioned in the Rev. F. O. Morris's admirable work on "British Birds," vol. ii., page 323. This nest, a very small neatly made one, was placed in a hawthorn, about four feet from the ground, and was built principally of *wool,* stems of grass, a very small portion of moss, and lined with horse-hair,

rabbits' fur, and a few feathers. It contained four eggs, marked precisely the same as the description given in the work above mentioned, which I have much pleasure in recommending as being one of the *cheapest* and *best* works on British ornithology.

Singular situation for the Nest of the Chiff Chaff, (Sylvia hippolais.)—On the 11th. of May, I saw a nest of the Chiff Chaff built in a furze bush, at an elevation of two feet six inches—it contained four eggs. I have since found one built in some brambles about a foot from the ground, containing three pure white eggs; both of these nests were not merely arched, but completely covered over, similar to the Common Wren's, only the aperture was rather larger. They were both built of dried grass and dead leaves, and lined with feathers and horse-hair.

Common Lark, (Alauda arvensis.)—In confirmation of the fact related by the Rev. R. P. Alington, in "The Naturalist," vol. i., page 58, I beg to state that I have several times seen the Sky Lark perched on a hedge; and on Sunday, May 7th., I saw perched on a furze bush on Bow Brickhill Heath, Bucks.,

> "The morning Lark, the messenger of day,
> *Saluting* with her song the morning gray."

Arrival of some of the Summer Birds of Passage in the neighbourhood of Woburn, Beds.—Chiff Chaff, (*Sylvia hippolais,*) April 2nd. Sand Martin, (*Hirundo riparia,*) April 7th. Martin, (*Hirundo urbica,*) April 11th. Chimney Swallow, (*Hirundo rustica,*) April 16th. Whitethroat, (*Curruca cinerea,*) April 16th. Cuckoo, (*Cuculus canorus,*) April 16th. Nightingale, (*Sylvia luscinia,*) April 21st. Reed Warbler, (*Salicaria arundinacea,*) April 29th. Sedge Warbler, (*Salicaria phragmitis,*) April 29th. Swift, (*Hirundo apus,*) May 10th.

The Nightingale and Sedge Warbler are very plentiful in this locality this year.

Woburn, Beds., May 20th., 1854.

OCCURRENCE AND CAPTURE OF A FEW *RARÆ AVES* AND *PISCES* AT FRASERBROUGH, ABERDEENSHIRE.

BY MR. T. EDWARD.

During the evening of the 10th., or morning of the 11th. of October, 1853, a specimen of the Ring Ouzel, (*Turdus torquatus,*) a female, and a Lesser Redpole, (*Linaria minor,*) a male, struck against the lighthouse, or, as it is better known in Fraserbrough and neighbourhood by the term of "The Old Castle," and were killed. Though both these birds breed in the higher districts of the county, the former rather sparingly, but the latter rather numerously, still they are not known to do so near the quarter where they were obtained, nor even to be occasional visitors there.

A male specimen of the Little Rotche, or Auk, (*Mergulus alle,*) was obtained on the 4th. of February, 1854. The black on the neck and higher portion of the breast is beginning to appear very conspicuously.

A very fine male Tufted Duck, (*Fuligula cristata,*) in full summer dress, was procured in the bay on the 6th. of June, last. It was alone, and after a hot pursuit, suffered itself to be killed with an oar.

A most beautiful male specimen of the Little Black-headed Gull, or Maw, (*Larus minutus,*) was shot on the sands on the 28th. of June. There were two, supposed to be male and female, but only the one mentioned was obtained. They were fishing in company with other Gulls and Terns. It is an adult bird, and being arrayed in its summer dress, has all its colours of the most vivid description imaginable. The head and neck is of the deepest black, which contrasts beautifully with the pure white and pearly gray of the other parts; and add to this the bright carmine of its bill and walking members. I have seen the bird, and should suppose that it is but seldom indeed that any ornithologist, even in the south of Britain, far less in the north, claps his hand on such a perfect specimen of this little active and rare Gull.

Near to the same spot where the Little Gull, above alluded to, fell, and only nine days after, a male specimen of the Sandwich Tern, (*Sterna cantiaca,*) was procured. It is also an adult bird, and in good plumage. It was feeding when shot in company with the Arctic Tern, (*Sterna Arctica,*) Kittiwake, (*Larus rissa,*) Black-headed Gull, (*Larus ridibundus,*) and a few immature Herring Gulls, (*Larus argentatus.*)

All the foregoing birds have been preseved by a gentleman in Fraserbrough, and are still in his possession, or, perhaps I should rather say, his collection, as he is now forming one; and I am sure I wish him God-speed, and not only him, but I should feel much gratified indeed if there were more gentlemen like him in other localities that would do so to. There is plenty of room, and much yet to be learned regarding the various branches of the natural sciences; and it appears to me that there is nothing better calculated for that purpose than *attentive* and *accurate local observers.*

But the *Pisces:*—

An entire and very good specimen of the Lesser Weever, (*Trachinus vipera,*) was caught in the bay about the middle of last month. It was brought to the gentleman whom I have already alluded to, and who very kindly forwarded it to me; and the individual, the captor, a fisherman, who brought it, said that he never took, nor ever saw any of the same kind of fish before. I have seen specimens from the Firth, but I must add that these occurrences are certainly few and very far between.

Being down at Fraserbrough last week on a zoological tour with one of my girls, Maggy, already alluded to in "The Naturalist," and whilst she, and a boy and a girl belonging to my friend there, were rummaging about amongst the sands, which are pretty extensive, Maggy, having observed something sticking up out of the sand, which she at first thought was a piece of *tangle,*

and was about to leave it as such, but being prompted by curiosity, she gave it a pull, when lo and behold! instead of a sea-weed she grasped a long spindle-like fish; as she said 'Home be my friends,' she sped in all haste, and chancing to be in at the time, I had the prodigy put into my hands a few minutes after it was exhumed, and with the remark that she had *"foun a lang tangle-like fish,* but didna ken fat it wis." On examination, however, it proved to be a specimen of that rare *Piscis,* the Equoreal Needle-fish, (*Syngnathus œquoreus,*) and a splendid specimen it is too. It is little, if any, the worse for being buried amongst the sand; in fact, I should say it is better for it. It is finely preserved, and will require very little trouble to make it a cabinet specimen. It is eighteen inches in length, and has the dorsal, the only fin it possesses, in the very best state of preservation. This species may have been procured from the Moray Firth before, but I am not aware of its having been so.

By what strange cause the specimen alluded to may have been cast on shore, or how long it may have been laying, I will venture no opinion, but will leave it to the readers of "The Naturalist," and others, to surmise for themselves. Pleased with the discovery, and proud of being the possessor, I leave all speculations on the subject to others.

High-Street, Banff, July 17th., 1854.

NOTICE OF SOME INSECTS OCCURRING IN HAINAULT FOREST.

BY GEORGE STOCKBY, ESQ.

As a local list I thought the following might prove acceptable for the pages of "The Naturalist." All, with the exception of one species, were collected by me, in my rambles during a series of years in this forest; and if anything should be found interesting in their locality or otherwise, my object in forwarding the same will be gained.

HYMENOPTERA.

Crabro clypeatus.—Occurs here in August but not common.

Melinus arvensis.—Found in the early part of the same month; local but not uncommon.

Nomada ruficornis.—This species is certainly not common here, I have only met with it twice.

Osmia hirta.—I have taken but two specimens of this species, as near as I can recollect, in the spring of 1847.

O. cœrulescens.—Of this species I have but one, taken, I believe, in the same year as the last.

Eucera longicornis.—Occurs in May; an abundant but local species.

Chrysis dimidiata.—Found on gravelly banks exposed to the sun in July.

Ephialtes manifestator.—Found sparingly during summer.

Cryptus obscurus.—Not uncommon in the beginning of June.

DIPTERA.

Xylota ignava.—Scarce: August.

Conipes tipuloides.—Common in the grassy glades of the forest in June.

C. rufipes.—Occurs in summer; not common.

Ctenophora pectinicornis.—Common in May.

C. flaveolata.—I met with two of these handsome insects in May, 1850. It seems to be rare in this forest.

Limnobia geniculata, (Black-jointed Cranefly,) is an abundant species in the marshy parts, especially when thickly shaded with trees.

NEUROPTERA.

Libellula Scotica.—I have only taken two specimens, in September, some years back.

Raphidia ophiopsis.—I have taken several of this insect in the early part of June, near the pools. The most favourable times are cloudy days.

Of *Hemiptera* and *Homoptera* I have selected three:—

Nepa linearis.—Rare: taken by an acquaintance in July.

Centrotus cornutus.—Taken in May by beating, but scarce.

Issus coleoptratus.—Taken in summer, but scarce.

Avenue Road, Old Ford, July 11th., 1854.

AIRY HOLME WOOD, AS A LOCALITY FOR LAND SHELLS.

BY J. W. WATSON, ESQ.

Airy Holme Wood; what an odd name! and how little known to Conchologists generally; and yet it possesses more claims for celebrity, than almost any other wood which I have seen recorded; since there are perhaps more rarities found in it, within the compass of a few hundred yards, than in the same area in the North of England, or South either. I have collected no fewer than thirty-six species, including the *Limaces*, but not any of the Water Shells, two or three species of which are found in a stream which runs through the wood.

Of these thirty-six, four are decidedly rare, and two or three quite local. It may be asked in what geological district is this famous wood? and what is it that renders it so favourable to Land Molluscs? It is situated about a mile from the summit of Roseberry Topping, in Cleveland, below the lias and oolitic groups, and just in the neighbourhood of rich beds of ironstone, which have but lately been sufficiently appreciated to invite capitalists to work them, though now they bid fair to be unrivalled in England. Ah! lovely Airy Holme, I trust thou art not to fall just yet, many an interesting

visit have I paid there, in search of Land Shells and Plants; and the recollection now, when many miles away, causes regret that there is no such locality in this neighbourhood. Another interesting geological feature is the Trap Dyke, which crosses it in one part. I do not suppose, however, that it has much effect in rendering the wood favourable to the growth of Molluscs. The chief cause of its fertility is the very great depth of vegetable mould in all parts, giving evidence of its having been a wood for centuries.

The trees are chiefly oaks, which are very favourable to the growth of a luxuriant vegetation; not like the beach and fir, that seem to exercise a baneful influence on most vegetable life. The place is what might be called a glen, the lower parts, near the stream, being damp—almost boggy. On first entering the wood one is struck with the dense luxuriousness of everything around, and amongst the plants most conspicuous are *Paris quadrifolia*, *Stachys sylvatica*, *Equisetum Telmateia*, and abundance of the pretty grass, *Melica uniflora*. Almost the first shell we find, presupposing that we make our search in the autumn, is *Helix fusca*, which is to be seen in considerable numbers crawling up the fronds of *Dryopteris Filix-mas*, or the stems and leaves of *Stachys sylvatica*, *etc.* In company with this may be found in abundance, *Succinea putris*, *Helix hispida*, and, crawling up the stems of young trees chiefly, *Clausilia nigricans*.

Searching amongst the dead leaves, moss, and the roots of plants, we are astonished at the number and variety of the little gems. Perhaps in one place we come upon a whole colony of *Azeca tridens*, easily recognised by its shining coat, barrel shape, and small mouth, protected by three threatening teeth; and within a yard or two all the *Zonites*, except *excavatus* and *lucidus; Helix aculeata*, *Vertigo pygmœa* and *substriata*, and *Zua lubrica*. In the damp parts of the wood, among dead leaves, moss, and at the roots of *Chrysosplenium alternifolium* and *oppositifolium*, we find the chief rarities, *Pupa Anglica*, with its numerous teeth; *Acme fusca*, and *Helix lamellata*, none of which are abundant—the collector may think himself fortunate if he finds half a dozen at a forage. They are all interesting shells, *Acme fusca* particularly so, the animal is much more lively than most of the small molluscs; its horns have the peculiar characteristic of being contractile, but not retractile, it has only two, with two jagged blackish spots at the base; its head too is peculiar, being long, even proboscidiform. Viewed under a good microscope the longitudinal lines on the shell are very beautiful, and cause one to consider Hartmann's name, *lineata*, adopted by Forbes and Hanley, as much more appropriate than *fusca*. Along with these are found *Carychium minimum;* and *Zonites crystallinus*.

Discontinuing our search amongst the leaves, etc., in order to relieve the stiffness consequent upon continued stooping, let us look under the lichen, (*Parmelia saxatilis*,) which covers the stems of the trees, and we shall there probably find a few specimens of *Balea perversa;* this shell, I believe, is particularly partial to limestone districts, being found there much more frequently

and abundantly than in localities where there is no limestone. I have found it in Dent Dale, not, however, confined to trees, but under the moss with which the walls are covered.

Pupa umbilicata, *Virtigo edentula*, and *Vitrina pellucida*, are found nearer the ground under the moss which climbs up the stems of the trees.

Flounders Institute, Ackworth, near Pontefract, June 21*st.*, 1854.

CONTRIBUTIONS TO THE ICHTHYOLOGY OF BANFFSHIRE.

BY W.

"Banffshire, a maritime county in the north-east of Scotland, lying between Lat. 57° 6′, and 57° 42′ north; and Long. 2° 15′, and 3° 40′ west; and bounded on the north by the Moray Frith; east and south by Aberdeenshire; and west by Morayshire, and part of Invernessshire. It has an extent of six hundred and eighty-six square miles, or four hundred and thirty-nine thousand two hundred and nineteen statute acres; its extent from north to south being fifty miles, and from east to west thirty-two miles; its average breadth not exceeding twelve miles." It is divided into two parts, the upper and lower, separated by a range of hills. The upper part is very hilly, rising to its greatest height in Cairngoram, four thousand and ninety-five feet.

When viewed from any of the hills in the lower district, it appears one mass of heath-covered hills rising behind each other in endless succession, and seeming to bid defiance to cultivation: but the scene changes on a nearer approach. Between the hills lie fertile and highly-cultivated fields, with their sides covered with trees in full luxuriance of growth; while others present a beautiful intermixture of rocks and copse. The lower district is a fine open country, of a rich, varied, deep, and well-cultivated soil, rising in some parts into considerable hills, and finely diversified with plantations. It contains many gentlemen's mansions besides Duff House, Cullen House, and the princely Gordon Castle, all surrounded by extensive and beautifully laid-out pleasure-grounds, affording a wide field for the student of Natural History.

It has about thirty miles of sea-coast, low and sandy, towards the west, at the mouth of the Spey; but becoming high and rocky towards the east, and terminating in the beetling cliffs of Gamrie.

Such an extent of hill and moor, of bog and field, of wood and water, must offer a wide field of research; but, notwithstanding the great facilities the county affords, it has never yet had the gift of one that has tried to do justice to its 'Flora and Fauna.' To supply in some measure the deficiency, I have had the boldness to begin with its Fishes, hoping that others may supply what I have omitted.

Lesser Weever, (Trachinus vipera.)—Not abundant: one was procured a

few years ago, entangled in the salmon nets near Banff, and is now preserved by Mr. Lemon, bird-stuffer, Macduff.

Red Gurnard, (Trigla cueulus,) is frequently met with.

Sapphirine Gurnard, (Trigla hirundo.)—A beautiful specimen was brought me a few days ago. I am told by the fishermen that they occasionally meet with them of two feet in length.

Gray Gurnard, (Trigla Gurnardus,) is common.

The Gurnards are popularly known by the name of 'Croonacks' in this part of the country.

Father-Lasher, *'Gundie,'* (Cottus Bubalis.)—Very common.

Rough-tailed Stickleback, *'Bandie,'* (Gasterosteus traehurus,) is most abundant both in the salt and in the fresh-water. Occasionally I keep a few for several weeks in a basin of water, and take great pleasure in watching their changes of colour. Sometimes they are of a light greenish gray colour, sometimes of a pale green, sometimes of an almost black, and sometimes of a variegated colour. It is really a beautiful sight to watch so many differently coloured tiny creatures sporting in all the luxuriance of happy life. It makes one forget his trials and pains, and sport along with them. I have observed a peculiar position they assume at times, particularly on supplying them with fresh water. They rise with their heads to the surface, inclining at about an angle of 45° and move round and round the basin, snapping with their mouths as if catching flies. At such times the nose assumes a reddish tinge, and the inside of the mouth is blood red. Is this red colour intended to imitate flesh, and serve as a decoy for flies?

The Fifteen-spined Stickleback, (Gasterosteus spinachia.)—Very common, though not so plentiful as the last. In this part, Macduff, it goes by the strange name of 'Willie Wanbeard.'

Mackerel, (Scomber Scomber.)—Rather plentiful during some seasons, and during others scarce.

Macduff, June 14th., 1854.

(To be continued.)

NOTES ON STAR-FISHES FOUND IN THE MORAY FRITH, AT MACDUFF, NEAR BANFF.

BY W.

Common Sand Star, (Ophiura texturata.)—This Star-Fish is common, though not to such a degree as some of the following:—A large and pretty complete specimen was brought me some time ago; it is of a pale reddish colour above, and white below. The disk is one inch and an eighth in diameter, and is pentangular. Professor Forbes says the disk is round, and the largest he ever saw was nine-tenths of an inch broad. On examining the figure in his "Star-Fishes," I find no appearance of cirrhi at the roots of the rays

on their sides. There is in the above-mentioned specimen a double row of cirrhi at the side of each ray; one row commences at the fifth scale, where the ray enters the disk, and is placed on a thin plate attached to the side of the ray. The other row is not attached to the ray but the disk. It commences beside the fiddle-shaped plate below, and extends to the upper triangular plates at the root of the rays. When it reaches the upper side of the disk, it is fixed to a large scale that runs along the side of the ray till it reaches the triangular plate. The one row at times overlaps the other, so that both appear as one. The animal has the power of contracting them, for in some parts of the specimen, they are not perceptible.

Ball's Brittle Star, (Ophiocoma Ballii.)—I find this beautiful Star-Fish in great abundance, brought upon stones, shells, etc., by the lines of the fishermen, when fishing for cod, haddocks, etc. The disk is generally pentangular, bulging out between the rays. The first specimen I obtained is fully one-fourth of an inch in diameter, and its rays, as nearly as can be measured, are one inch and one-fourth long. The disk is of a pale rose-colour, in some rays approaching to white, veined with a much darker rose-colour. The rays of the same pale rose-colour are crossed by bands of a dark red, which become paler as they approach the tips of the rays. In some specimens the disk is nearly white, with rose-coloured rays; in others the disk is variegated, sometimes with rays of a pale rose-colour, sometimes of a brighter colour, all, however, crossed, as in the first specimen, by darker bands of red. In one example the spines are of the same dark red.

Granulated Brittle Star, (Ophiocoma granulata.)—This is also rather a common Star-Fish; I have now lying before me three rather large specimens. The disks of all of them are pentangular, bulging out at the insertion of the rays, and are of different colours. One is of a bluish colour, another is of a pale rose-colour, and the third is beautifully variegated. I received the last specimen alive, and in so doing enjoyed a real eye feast. The colours were most brilliant, and, though much faded now, enough remains to tell of its former beauty. In the centre there is a small spot of a dark red colour, approaching almost to black. Around this is a reddish dun space of about one-fourth of an inch in radius, with an irregularly notched exterior edge. To this succeeds a band of the same dark red as in the centre, shading off into a bright port-wine colour, reaching a full half inch along each ray. The disk measures three-fourths of an inch in diameter, and the rays fully four inches.

Daisy Brittle Star, (Ophiocoma Rosula,) is rather common. Professor Forbes says the disk is sub-pentangular. I have a specimen before me, whose disk is round.

Hoping that these rude and imperfect notes may induce other naturalists, (a title I do not aspire to,) to give their notes on this interesting subject; I shall not trespass farther on the readers' patience, (if I happen to have any,) nor on the valuable pages of "The Naturalist;" but close my notes

with the intention, however, of completing them as early as possible, since I have once begun them.

(To be continued.)

Macduff, March 22nd., 1854.

Miscellaneous Notices.

Notes on Eggs.—Yesterday, June 7th, when out bird's nesting with two friends, we found a Yellow-Hammer's nest in a thorn hedge on the road side, about seven feet from the ground on one side, and five or six feet on the other: the nest was large and but ill-concealed. The other day we found four Yellow-Hammer's eggs at the bottom of a small bush on the bare ground. The other day also a Bullfinch's nest was found, to my surprise, in a thorn hedge by the road side: the hen bird was seen on the nest. Also a Chaffinch's nest, with eggs of a blue ground colour, just resembling those of the Bullfinch, except that they were deficient in breadth; and they had a zone of colouring resembling that of a Greenfinch.—JOHN WILLIAM ECCLES, Medstead, Alton, Hants, June 8th., 1854.

Attack of a Magpie's nest by Crows.—I send you an account of a curious battle of birds which I witnessed in Northamptonshire, about the year 1838. At that time I was resident at Middleton Cheney, near Banbury; and in some high elm trees, about a hundred yards from the house, a Magpie had built for several years. The first lot of eggs were usually taken for myself and brothers, but a brood was always hatched. About the year mentioned, 1838, for two successive years, a pair of Carrion Crows attacked the nest when the young were half-fledged; and after a long and noisy combat between them and the two parent birds, succeeded in carrying off one nestling. They began the attack about ten o'clock, and it was near twelve ere they had secured their first prize. As soon as they had devoured this, they renewed the engagement, and had eaten the second nestling by about two o'clock. The magpies had defended their castle with great spirit and resolution, but now appeared worn out; and the third victim was being borne away about half-past two, when I shouted at the top of my voice, and the Crow, which was just above me at the height of forty feet, let fall the young bird, but instantly returned and fetched another from the nest, which I also made it drop. One of them lived two days, as the field was pasture on which it fell. Several persons witnessed this battle, which lasted from ten until after two o'clock, when the Magpies gave in; and but for my interruption, the Crows would have had it all their own way. The second year the Crows were scared away before they had fleshed their bills, after about an hour's sharp fighting, during which time the Magpies had held their own. Since that time, 1838 or 1839, the Magpie has never built in these trees, though there is a nest every year in smaller trees in the same field. I never heard of a similar case of deliberate attack by Crows on Magpies, and submit the above for your consideration.—JAMES CROOME, 20, Great Ormond Street, Bloomsbury, July 26th., 1854.

On the 20th. of May last, while rowing on the Serpentine, I started a Sandpiper, a small one, from the Rhododendron bank; only one was visible; and on the 23rd. and 26th. I again put it up near the same spot, followed it to the opposite bank, whence, on my close approach, it returned to the first-named spot: I have not seen it since. Which of the Sandpipers was it? and had it a nest there?—Idem. Probably the *Totanus hypoleucos*.—B. R. M.

Occurrence of the Nightingale, (Philomela luscinia,) *near Barnsley*.—The account in last week's "Doncaster Gazette" of the capture of nine Nightingales in Edlington Wood, near that town, will give pain to every true lover of nature, and few there will be who will not unite in the editorial condemnation of the "barbarians" who have, at the same time, deprived these sweet warblers of their liberty, and the public of their delicious out-door music. Knowing that those who have the care of that noble wood are desirous to preserve these sweet singers, one is surprised at the successful audacity of these wholesale exterminators; for, considering how soon these birds die in captivity, it is little better than destruction to tear them from their natural haunts. Would that there were as much care in preserving these innocent creatures

as there is with respect to game. How much more innocent gratification to thousands would be the consequence; but there are few protectors of small birds like the owners of Walton and Stainbro' parks. Even in this last beautiful domain three Nightingales, I am credibly informed, were shot by a former gamekeeper. We have now to go a dozen or score miles to hear one, chiefly to Edlington, though seldom a year passes without the occurrence of the Nightingale in this part, but we only hear of it when it has fallen into the stealthy bird-catcher's snare. Even this class of men might be impressed to some extent with the wrong and absurdity of this practice as regards confining the bird, and the poor starving nature of their calling, every year growing more uncertain and less gainful, as the birds are thinned off. I have a singular instance of self-denial to record of one of them, who sent me word on the very day this Nightingale capture was recorded, that he had heard one on the 24th. of May in a small wood near Elsecar, five miles from Barnsley, which he could have caught if he had wished. Various engagements prevented me proceeding there until the 10th. of June. Soon after reaching the wood and taking my bearings, then making my way, sometimes on all-fours, under the thickly-tangled brushwoood, I heard, amid the chorus of warblers, the delightful thrilling strains of 'jug, jug, jug'—"and one low piping note more sweet than all"—distinguishing the Nightingale from all other songsters. Not satisfied with this day's entertainment, I started again with two companions on the following morning at two A.M., and reached the place at day-break, just as the whole wood appeared to be bursting forth in melody. In about half an hour we had the pleasure of realizing the fine description of that truly natural poet "the peasant Clare,"

> "Anon from bosom of that green retreat,
> His song anew in silvery stream would gush,
> With jug jug jug, and quavered thrilling sweet:
> Till roused to emulate the enchanting strain,
> From hawthorn spray, piped loud the merry Thrush
> His wild bravura thro' the woodlands wide."

We stayed about two hours, but only heard the song at intervals of about a quarter of an hour, for, as our informant said would be the case, after sunrise the old birds would be busy feeding their young. We saw them frequently with grubs in their bills. My thankful acknowledgment for the information given by him, knowing my tastes to study birds in their natural state, rather than in the cage or museum—too much the modern mania—appeared as satisfactory to him as if he had made a captive of the bird.—T. Lister, Barnsley, June 18th., 1854.

The Dotterel, (Eudromias Morinella,) *at Brighton*.—I have lately bought of Swaysland, the bird and animal preserver of Brighton, a fine male Dotterel, which he informs me was shot towards the end of May last, together with five others, in a field near the Dyke road. He also showed me several rare birds, procured at different times near Brighton; among which were the *Pernis apivorus* and the Short-eared Owl, (*Brachyotos palustris,*) shot at Shoreham, in 1853; two specimens of the rare *Motacilla alba*, a Hoopoe, a Great Shrike, a Dartford Warbler, and a variety of *Passer domesticus*, with white wings and a light chesnut back; a Squacco and a Night Heron, (*Nyctiardea grisea,*) a male and female Whimbrel, several Spotted Sandpipers, (*Actitis macularius,*) a Knot in summer plumage, two Little Stints, (*Tringa minuta,*) one Little Ringed Plover, (*Ægialites minor,*) some Gray Plovers, a Greenshank, (*Glottis chloropus,*) and one immature specimen of *Larus minutus*.—J. Cavafy, Brighton, August 7th., 1854.

Occurrence of Pied Rooks, (Corvus frugilegus.)—Whilst walking along the coast near Dunbar, towards the end of July, in company with an ornithological friend, my attention was directed by him to a flock of Rooks a short way off, among which was one with a bar of white across either wing. It seemed to be much shyer than the others, like all these albinoes, for, as soon as we approached, it made off, whilst the rest of the flock was almost quite regardless of our presence. A short time previous, the same friend had an opportunity of examining a specimen which was shot from the nest in a neighbouring rookery, and which had, besides the white on either wing, also a few white feathers in the tail. Perhaps the above may be of some interest to the readers of "The Naturalist," and so worthy of a place in your valuable magazine.—W. R. Robertson, 72, Bath-Street, Glasgow, August 23rd., 1854.

The Mountain Finch, (Fringilla montifringilla.)—On the 10th. of July last, a female Mountain Finch, which has been kept in a cage since the autumn of 1852, by Mr. Jackson, laid an egg,

which was unfortunately broken, but with much care, and by putting it on the egg of a Hedge Accentor, a fair specimen was made of it, and which, with another (sound one) laid on the following Monday, the 17th., is now in Mr. Jackson's very excellent collection of British Birds' Eggs, to which they make a very valuable addition. The colour of the eggs is of a pale bluish green ground, as given in the first figure in the Rev. F. O. Morris's "Nests and Eggs of British Birds," without the dark spots, but smeared with a dull rusty brown, dense at the large, and gradually diminishing towards the small end, which is entirely free from brown. As these eggs differ so much from Mr. M.'s second figure, and also from the figure given by Mr. Hewitson, in his splendid work on birds' eggs, the question arises, does confinement modify the colouring of eggs? The affirmation is borne out by some eggs laid by a Kestrel, for many years kept in confinement by Mr. Jackson, who has the eggs still in his possession, the colouring matter of which is collected at the small end, leaving the large end of a pure white.—Stephen Clogg, East Looe, August 4th., 1854.

A short time since, I was struck by the strange appearance of a Skylark, (*Alauda arvensis*,) which rose from a wheat-field, singing most joyously and clearly, at the same time bearing something white in its mouth; it proved to be a mutin which he was carrying from his nest, and which dropped close to my side on the road where I stood. I should have thought such a burden would have interfered with the clearness of the song, but it had no such effect.—Idem.

In the latter part of June, my dog disturbed a nest of young Willow Wrens, when one apparently more frightened than the rest, attracted his attention by flying before him, keeping a few feet from his nose; Mr. Jackson, another friend, and I, also started off in pursuit of the same bird; but after a fruitless chase for two or three hundred yards, the apparent youngster flew vigorously into an oak overhead, when we discovered we had been lured away from the nest and young by one of the old birds, who, I have no doubt, rejoiced at having deceived three of the lords of creation. This is to me a new trait in the history of Willow Wrens. —Idem.

Is it a Ghost?—Last night, between nine and ten o'clock, on my way home from the country, in passing through a field which bears the unenviable notoriety of being haunted, I was amused by the appearance in the twilight of a huge misshapen white figure hovering over and accompanying my setter in all his turnings and windings, whilst hunting over the field; presently he came close to me, when I discovered the figure to be nothing more than a White Owl, and on his again scampering off from me, followed by the Owl, it struck me that the two would have made an excellent ghost if seen by any one of a superstitious turn; and being unaware of the nature of the apparition—a White Owl, on the back of a large black Setter, coursing over a so-called haunted field.—Idem.

The Greater Spotted Woodpecker, (Picus major.)—On the 17th. of May last, I procured a female Greater Spotted Woodpecker with eggs, from an orchard near Shrewsbury. The eggs were five in number, white, and about the size of a Starling's. The bird has since been set up by Mr. John Shem, Taxidermist, High-Street, Shrewsbury.—John Riddell, Leamington, June 14th., 1854.

The Reed Warbler, (Salicaria arundinacea.)--On Tuesday last, May 30th., I found the nest of the Reed Warbler in an elder bush, containing three full-fledged young ones. This is certainly the earliest nest I ever heard of, as I have seldom found a nest with eggs in before the 18th. or 20th. of May. Perhaps some persons may think I have mistaken the bird, as I know there is a very common idea that these birds build only on reeds; but I can at once disprove this, by forwarding you nests, (and eggs from the same nests,) placed in the side branches of the upright poplar, the elder, the dogwood, and the alder. I have also found the nests in lilacs, and once in some pendant ivy. In this part of the county we have a great many pollard willow trees, and I frequently find the nests placed on the small twigs which grow about three feet high in the heads of these willows, which would make the total height from the ground about ten or eleven feet: I also find them in osiers about four feet from the ground. By the small twigs on the heads of the willows, I mean the boughs that have been overgrown by the others, and consequently never attain a size thicker than a small switch. Should you think this, to me, remarkable occurrence of the early breeding of the

Reed Warbler, worth noticing in "The Naturalist," perhaps you will have the kindness to insert a short notice.--C. THURNALL, Whittlesford, near Cambridge, June 5th., 1854.

Luminosity of a Snake.--Some years ago, when residing in the Fylde district of North Lancashire, I was taking a ramble on the banks of the River Wyre, near Rawcliffe Hall, the seat of R. W. Ffrance, Esq., where, upon a slight embankment, my attention was directed to a luminous object a few yards in advance. It appeared to be about the size of a half-crown piece, and round like that coin, but of the most beautiful colour, not unlike that *greenish golden* hue which some of the Beetle tribes display. My already excited curiosity was soon to be much heightened, for, as I approached, and had got within about four yards of the *unknown*, it suddenly changed its flat circular into that of a serpentine form, and darted with almost the speed of thought, into a hole situate within a few inches of where it had been basking. When uncoiled, it appeared to be about the thickness of an ordinary quill, and about five inches in length. I watched the hole for a considerable time, thinking it would re-appear; but was not favoured with such an indulgence. I marked the spot, and paid it many visits, and was fortunate enough twice more to see his puny Snakeship; but he was so shy, and his movements so very rapid, that I failed in obtaining a better view than when first I had the opportunity of seeing him. I may remark that on each occasion when I saw the animal, it was about noon on a bright and sunny day, towards the close of the month of June. Should you consider the above sufficiently eligible to a *niche* in your valuable journal, I have no doubt but some of your scientific readers would recognise the Snake and its genus.—J. P., Rochdale, March 23rd., 1854.

January, 1853.—A splendid specimen of the *Phalacrocorax graculus* was shot near Pennance Point, Swanpool, by Dr. William's son. The bird was in spring plumage; a large and high plume of feathers, a perfect toupet crowned the forehead just above the superior edges of the orbits.—W. P. COCKS, Falmouth, 1854.

February.—The *Liparis vulgaris*, two and a half inches in length, was found under a stone, low water mark, Trefusis Point, Mylor, by the son of the Rev. Mr. Yescombe, of Flushing. —Idem.

Zylophaga dorsalis, alive in a piece of wood, from Trawl refuse, by Miss Vigurs. It contained several dozen specimens.—Idem.

A fine specimen of the *Limosa melanura* was shot by the Rev. Mr. Jackson, of Grade, at the Lizard, July 14th. Preserved by Mr. Chapman, Falmouth.—Idem.

Phalaropus hyperboreus was shot by Dr. William's son in the pool, Swanpool, September 16th. Mounted by Mr. Chapman.—Idem.

Physalia pelagica was found alive on the sands by Master Basten, and brought to me by Mr. W. Bullmore, November 2nd., 1853. It was six inches and one quarter in length.— Idem.

Entomological captures near Cartmel.—A female specimen of the *Polyommatus acis*, or Mazarine Blue Butterfly, and also a specimen of the *Anania Octomaculata*, or White Spot Moth, both considered rare, were taken by me at Grange, near Cartmel, Lancashire, in the beginning of this month.—THOMAS KING ATKINSON, Cardew Lodge, Carlisle, May 6th., 1854.

The Small White Butterfly, (Pontia Rapæ.)—The Small White Butterfly captured by Mr. S. Stone, March 2nd., must, I think, be the earliest taken ever recorded. I have an entry in my diary, March 22nd., 1852, of one I captured very weak, and apparently just crept out from its chrysalis. This I thought remarkably early, and therefore worthy of notice.— SIDNEY HYLE, Southampton, May 9th., 1854.

The Wolf-Fish, (Anarrhichas lupus.) Many of these have been brought me by the fishermen during the past winter; they are various sizes, from one foot to three and four feet. Yarrell states the colour to be of a brownish gray: this is the case with those of the middle size I have obtained. The smaller ones are of a reddish brown colour, while the larger ones are of a deep blue colour. The fishermen say that all the large ones are of this blue colour.—W., Macduff, March 22nd., 1854.

Note on the Nemophila.—Last year I had two patches of the *Nemophila—insignis* and *maculata* —growing near each other upon the same border. From seed cast by the latter, there are several plants now in flower, whose petals are of the most beautiful *rose*-colour, and on the tip of each, corresponding to the dark spot on the petal of the *maculata*, are marks of a darker hue than the other part of the flower, but not so deep as on the *maculata*. The leaves are similar to those of the *insignis*. I have presumed to think they are *hybrids*—the production of both species. Probably some of the readers of "The Naturalist" have had a similar phenomenon brought under their observation.—J. P., Rochdale, July 4th., 1854.

Second budding of Deciduous Trees.—This circumstance is particularly observable on the Lime trees in and about the metropolis, which at the present time have the light green appearance they had in early spring. In fact, the London Limes appear annually to lose their leaves about the end of June, and the trees are quite bare for a few days till this second crop appears. This early falling of the leaf does not so often take place in the country, and it is most probably owing to the impure atmosphere that those planted in the parks and squares of London do so. It is not only Limes that produce this second crop, Elms, Oaks, and various others, when their first leaves have been blighted or nipped by the frost, frequently bud afresh late in the summer, but these leaves never reach the size of the first.—R. Mc'L., London, July 15th., 1854.

The Hawthorn, (Cratægus oxyacantha.)—I gathered Hawthorn in full bloom yesterday, April 12th., from a hedge near here; the other bushes around showed no signs of budding. I could not ascertain the favourable circumstance that had led to its premature development.—George M. Barnard, Little Banfield, Braintree, April 13th., 1854.

The specimen in fine flower was sent with the above.—B. R. M.

Possible source of fallacy in the formation of a local Fauna.—A curious instance of one of the sources of fallacy in the formation of a local fauna, has presented itself in this neighbourhood, two fine specimens of *Pennatula rubra* or *phosphorea* having been brought to my friend Arthur Adams, Esq., Surgeon, R. N., and said to have been found on the shore, near Haslar barracks. They were contained in a common pickle bottle, and found to be strongly impregnated with spirit of wine, leading to the belief that they had been thrown overboard from some ship which had arrived from abroad, say the East Indies or Mediterranean, where they are chiefly found. In this way possibly not a few spurious species may have been introduced into the British Fauna. The specimens above referred to, are now in the Museum of this establishment.--J. Rose, M. D., Royal Hospital, Haslar, May 9th., 1854.

Note on Honey-dew.—Allow me to offer, through the medium of your journal, a few remarks and observations of my own upon a subject closely connected with entomological study, and about which much diversity of opinion prevails; I allude to the cause of the production of that singular substance termed *honey-dew*. I believe the most generally received opinion among entomologists is, that it is produced by the *Aphis humuli* and its allied species. I entertained this opinion till further and close investigation confirmed me in the opposite belief; namely, that the substance is of vegetable origin. During the latter end of the spring of this year, I have had great opportunities of examining this phenomenon; for it appeared in such abundance, that in gardens and orchards the leaves of the currant, plum, and other trees distilled from their tips a copious supply of honey-dew. The whole surface of the leaf was covered with it, and a large drop of this substance hung pendant from the end of every leaf. It is true that the *Aphides* appeared in considerable numbers also, but had they been a hundred fold more numerous, I feel sure they could not have possibly been the cause of the supply; besides, the honey-dew was as abundant on leaves where not an *Aphis* was to be seen, as on those which were covered with them. To make myself sure, however, that the substance was excreted from the plant, and not produced from the insects feeding above, I wiped and dried a particular leaf, and placing a piece of writing-paper between this and the over-hanging ones, waited for the result. In the course of a few hours, the leaf so wiped and dried, had become partially covered with honey-dew, though not to the extent it was before; probably from its sources of excretion being greatly exhausted. It may not be out of place to remark that the paper placed between the leaf and those above it had not the smallest particle of honey-dew visible upon it, which it would seem most likely to have had, if the honey-dew had been the ejecta of the *Aphides* feeding above. From the formation of the feeding apparatus of

this *aphis*, it would seem most improbable that this substance could be its food; may not then its appearance be ascribed to some peculiarity in the atmosphere, which, while it stimulates the leaf to the secretion of this fluid, is also favourable to the hatching of the eggs of the *aphis* deposited at the end of the preceding autumn?—T. J., Tottenham, June 16th., 1854.

The Querist.

White variety of the Hyacinth.—In "The Naturalist," for this month, Mr. Hyle, of Southampton, mentions having found the flowers of the Wild Hyacinth perfectly white. In this neighbourhood I have frequently found it, but oftener of a very light blue colour; but it is not at all common. Within a few hundred yards of the house in which I reside, there is a brook, which is the division betwixt two kinds of soils, on one side it is clay, on the other sandy; but I find the white flower to be more common on the clay soil than on the other, and in a ramble of a few hours, like Mr. Hyle's, I think I should be able to gather some dozens of them.—T. S., Holmfirth, August 9th., 1854.

The query of your correspondent, Sidney Hyle, in the last number of "The Naturalist," reminds me of a similar observation that I made on Whit-Saturday last, June 10th. During eight hours ramble through woods and lanes where the Wild Hyacinth, (*Hyacinthus non-scriptus*,) was growing in the greatest profusion, I found *one* pure white; it was a long distance from any house, and in a situation which deters me from thinking it had got there from any garden. I may observe, though a rambler, it is a number of years since I saw one in a similar situation.—E. Simpkin, Bury, Lancashire, August 25th., 1854.

Harebell, (Hyacinthus nonscriptus.) *Bluebell*, (Scilla nutans.)—Mr. Hyle's query induces me to observe that white-flowered varieties of this plant are frequently met with on limestone soils in Yorkshire. I remember rambling one fine day in spring, now many years ago, to the village of Berwick-in-Elmet, celebrated for its stupendous Saxon earthwork, known as the Hall Tower Hill; besides some minor archæologieal attractions in the shape of an old church, and the base of a cross; close to which stands another pleasing relic of days long past:

"A may-pole gaye, with garlandes hung."

After satisfying my antiquarian curiosity in the village, I strolled towards the woods, stretching on to "Towton's fatal dale," and in crossing the fields met with two lads who had been gathering Bluebells, amongst which I noticed many white varieties; one of the little fellows, full of good-nature, would turn back and show me where these *White Bluebells*, as he called them, grew. It was a copse, at no great distance north-east from the village; and there I found them in plenty, together with a flesh-coloured variety. Being ignorant of the locality your correspondent mentions, I cannot speak as to the rarity of his specimen, but in our limestone districts I find they are not uncommon. I never met with a white one on sandstone soil, but perhaps a more extended search would have been better rewarded. It may not be out of place to mention that in my vagrant rambles about Berwick, and the neighbourhood, I have occasionally met with flowers of the Wood Anemone, with the *upper* side of the petals of a light purple colour. Thus we have two botanical peculiarities in one locality, with limestone soil, which I think will not be so readily observable on the sandstone; but probably some of your better informed contributors can furnish further particulars on the subject.—John Dixon, Leeds.

Last spring I found a nest composed of dry stalks of grass, moss, and a little hair, placed rather high up in a quick hedge, and containing an egg very much resembling that of the Nightingale, though not so bulky. The thick end was encircled with a hair-like streak of black. Ultimately the bird laid six eggs, all of which were streaked like the first. I saw the hen on her nest several times, she was of the shape and size of a Sedge Warbler, having a light streak over the eye. The name of the bird will oblige C. E. Smith.

Some years ago I found a nest composed of dry stalks of grasses, placed in a low yew bush, and containing a pure white egg of the size of that produced by the Martin. Can any correspondent inform me what it was?—Idem.

I have read somewhere of "Waterton's Triumphant Defence of the Ivy."—Where is it to be found?—F. O. Morris, Nunburnholme Rectory, August 17th., 1854.

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Contributions have been received, up to October 19th., from J. Garland, Esq.;—J. L. Wight, Esq.;—T. Southwell, Esq.;—G. Donaldson, Esq.;—Mr. T. Edward;—Mr. E. Parfitt;—W. Kidd, Esq.;—E. K. B.;—G. Stockley, Esq.;—L. Shields, Esq.;—J. P.;—D. Ferguson, Esq.;—J. E. Daniel, Esq.;—T. Fuller, Esq.;—J. Dixon, Esq.;—Henry Daniel, Esq.;—H. Smurthwaite, Esq.;—S. Stone, Esq.;—H. H. S.

Errata.—Page 227, line 18 from bottom, for 'Stockby' read 'Stockley.'—Page 226, line 22, for 'Arctic Tern,' (*Sterna Arctica,*) read 'Common Tern,' (*Sterna Hirundo.*)

Communications, Drawings, Advertisements, etc., to be addressed to BEVERLEY R. MORRIS, Esq., M.D., Driffield;—Books for Review, and Parcels, to the care of Messrs. GROOMBRIDGE and SONS, 5, Paternoster Row, London.

THE BIRDS OF STRATHBEG AND ITS NEIGHBOURHOOD, WITH A FEW REMARKS UPON THEIR HABITS, ETC.

BY MR. THOMAS EDWARD.

The Loch of Strathbeg, though by no means remarkable for its sublime or romantic scenery, having none of that, nor yet for the great extent of its waters, is nevertheless a most interesting spot to the naturalist, particularly the ornithologist, as being the resort of myriads of wild-fowl during one portion of the year, and the breeding-place of great numbers during another. Lying as it does in the midst of a comparatively flat, open, cultivated district, and bordering on the coast, the birds flock to it from all quarters during winter, particularly if a storm prevails in the sea; its natural advantages affording them both food and shelter. In form it is what might be called *pear-shaped*. It is said to be betwixt three and four miles in length, and about half a mile in breadth where it is broadest. To walk round it, it is considered to be about seven miles; I should say more; at least I have made the tour several times, and I never yet accomplished it in less than a day, and that, too, a long summer one. But, of course, this is no great criterion to go by; for to tell the truth, even on myself, which, by the by, must not always be done, I have been known to take the greater part of two days and a night, on more occasions than one, to accomplish that which any clever little fellow would have gone over in less than, or, at least, in about half a day. It must be borne in mind however that the localities alluded to were rich ones, that is in specimens; and I can assure the reader that Strathbeg is not a poor one. But be this as it may, I must say that whoever makes the tour of the Loch, he has had a very good morning's walk.

From Peterhead it is distant about ten miles, and from Fraserbrough about seven and a half. A stage-coach, from the former to the latter place, once a day, passes at one part, near the parish church of Crimand, at perhaps a a little over a mile from the Loch. It can also be approached from either of these towns along the beach, which is sandy. There are a few small fishing villages between Fraserbrough and the Loch, but I am not aware if any of them could afford anything like comfortable accommodation to travellers, but I should think not. The Loch, and grounds adjoining, except a small portion, belong to the estate of Cairness, but are at present held by Mr. Bannerman, of Crimmonmogate, so that no one carrying a gun can visit the place without permission from that gentleman, or some one for him.

With these brief remarks I would now at once take the Loch, beginning with its winter appearance, and then go on to its aspect in summer.

There are certain places of it which always remain open for several days, sometimes weeks, after all the other pieces of water in the neighbourhood are entirely frozen over. To these places all the water-fowl, from far and near, are seen in frosty weather to congregate in prodigious numbers; so great indeed, that the common people who live thereabout, believe, and say it

BRITISH MUSEUM NATURAL HISTORY.

too, that all the birds in the world come there in winter; and, to use the words of the murderous gunner, "afford most excellent sport."

Should the neighbouring ocean rise frowningly, by angry tempests tossed, then do the feathered tribes, that love to sport on or near its surface in calmer days, betake themselves in great numbers to the more peaceful waters of the Loch, and mingling with the numbers already spoken of, form vast hordes, and, as may be easily conceived, constitute a very motley group. In such amazing crowds are they at times, that when they rise *en masse*, as they not unfrequently do, especially when disturbed, they literally darken the air; and the noise they make on such occasions is perfectly deafening. But it is not these countless hosts, however interesting and beneficial they may be to others, that we have so much to do with as it is the various species of which they are composed; and to enumerate these as far as is known to me; I will now proceed; but first, and before I go any farther, I would beg leave to state here that it is to my much lamented friend, the late Rev. James Smith, of Manquhitter, and to whom I have already alluded in the pages of "The Naturalist," that I am most indebted for my information concerning the "Birds of Strathbeg"—an authority, alas! alas! for his early, too early departure, which I am truly proud to acknowledge. I am likewise under the greatest obligations to his highly-esteemed and worthy brother-in-law, Mr. Henry Ewerdine, W. S., Cairness, who lives near by the Loch, and to several members of his kind and intelligent family for their very valuable assistance in these matters—assistance which I trust will ever be remembered by me with the deepest gratitude and love; being, as it was, as cheerfully given as it was thankfully received.

To others, and to all who have in the least way aided me in that quarter, and in this undertaking, I would also beg here to offer my sincere and heartfelt acknowledgments. This done, I would now proceed with my catalogue, commencing with the *Cygnidæ*, as being the largest genus which visits the Loch.

Although small parties of these birds annually arrive, only two species have as yet been distinguished, namely, the beautiful White Hooper, (*Cygnus ferus,*) and the no less fair and elegant Polish Swan, (*C. immutabilis;*) the latter, however, may be said to be of rare occurrence. I am only aware of two specimens which have been obtained, the one in 1814, and the other in 1826.

Of Geese there are pretty large numbers.—

The Bean Goose, (*Anser segetum,*) is yearly met with, and at times very plentiful. A somewhat small species of this genus, with a rose-coloured bill and dark vermillion feet and legs, was shot in the spring of 1843, and was supposed to be a specimen of *A. brachyrhynchus*, or Pink-footed Goose. What else could it have been? It was alone when discovered, and extremely shy, so that it was with considerable difficulty that it was obtained. It was sent south for preservation; but what became of it afterwards I am not aware.

The White-fronted, (*A. erythropus,*) and the Bernicle, (*A. leucopsis,*) have

both occurred; as also the Brent Goose, (*A. Brenta.*) This last is, I believe, the most abundant of all this genus which visit the Loch, and is in some seasons extremely numerous. They are also frequently to be met with in summer, individually, or in small parties. In the month of June last year, I pursued a flock, composed of about thirty birds, about the Loch for the greater part of a day in the hopes of getting a shot, but in this I was most miserably disappointed from their extraordinary shyness; a trait in their character which I have never as yet observed in them during winter.

The Canadian Goose, (*A. Canadensis.*)—A bird resembling this species, but which was at first supposed to be a young Swan, was obtained on that part of the Loch which lies nearest to Rattery, during the winter of 1819. When first observed, it was literally surrounded and beset by a host of other birds, chiefly Gulls, which were teasing and tormenting it, by pecking and screaming at him in a most fearful manner; the poor Canadian all the time exhibiting the most comical gestures.

The Rev. A. Boyd, of Crimand, a gentleman well known to several naturalists, and one whose hospitable manse is always open to me as a home when I go a rambling after Nature in that direction, and to whom I intend hereafter to refer, wrote me last winter that a strange sort of Wild Goose had taken up its abode in his pond. From the minute and pointed description which he gave of the bird, I was enabled at once to return him word that it could be nothing else but a specimen of that rare species, the Egyptian Goose, (*A. Eyyptiacus,*) which afterwards proved to be the case, as will be seen. The pond, or dam lying in an exposed situation, and it being Mr. Boyd's wish that the stranger should not be destroyed, but rather preserved alive, if possible, he requested the people all round not to shoot, or molest it in any way. This was of course complied with, from the fact that the Reverend gentleman is, from his amiable qualities, a universal favourite in the district, and indeed beloved by all who have the pleasure and honour of his acquaintance. The bird continued to frequent the pond for about two months, where Mr. B. caused food to be laid down for it every day, and it became a little more tame. It only abode on the dam, however, during the day-time. As regularly as evening came it took its departure, but as invariably as morning dawned it re-appeared. Where it went to during these nightly peregrinations, was never rightly ascertained, but it is conjectured that the Loch had been the place of resort, which doubtless it had. On the day however preceding the great snow-storm, which commenced in January last, and which was so severely felt by man and beast, Goosy was observed to take his departure considerably earlier than usual; and in doing so, bade a lasting farewell to the kind folks of Crimand, for, like the little Frenchman, he has never been seen or heard of more. Mr. Boyd being in Liverpool some time after, and having visited a poulterer's yard, observed what he supposed at first to be his old friend, the Goose, or at least he was sure if it was not that, it was one of the same

sort, from the family likeness; and on inquiring its name, was informed that it was an Egyptian Goose.

We now come to, perhaps, the most extensive tribe which visits the Loch, namely, the Ducks. Of these the Mallard, (*Anas boschas,*) or, as it is here termed the 'Moss Duck,' is perhaps the most numerous; the Widgeon, (*Mareca Penelope,*) being the next. I have seen some most excellent specimens from that quarter. The beautiful little Teal, (*Anas crecca,*) is also in pretty fair numbers. The Garganey, (*Anas querquedula.*)—Although I have placed this pretty bird here, I am not aware whether it is a winter visitor to the Loch or not, but this I know, that whilst on a boating excursion in the summer of 1850, with Mr. John Ewerdine, we met with a party of three, which we pursued, but unluckily the same success attended me as did with the Brent Geese; always taking to wing as they observed us pulling towards them, and not allowing us to approach near within gun-shot.

The Scaup, (*Fuligula marila,*) the Tufted, (*F. cristata,*) and the Red-headed Pochard, or Dun-bird, (*F. ferina,*) as also the Golden-Eyed Garrot, (*Clangula Garrotta,*) are all to be met with. The Scaups and the Golden Eyes are more plentiful than the others. I have likewise on several occasions met with the Dun-bird on the Loch during summer. The Pintail, (*Anas acuta,*) the Ferruginous Duck, (*A. ferruginea,*) the Harlequin Garrot, (*A. histrionica,*) and the gaudy Shoveler, (*A. clypeata,*) have all occurred. It is only a few winters since a most beautiful specimen of the Harlequin was shot there by a rabbit-catcher, who, I believe, for the sake of a very paltry sum more than he was offered on the spot, sent it, like the other rarity already spoken of, away south. The Shieldrake, (*A. tadorna,*) and the Eider Duck,* (*A. mallissima,*) are also occasional visitors. Although there are some excellent localities, that is to appearance, for the Shieldrake breeding in the neighbourhood of Strathbeg, I have never met with them, nor have I ever heard of their doing so. Other visitors, however, may yet make the discovery.

A specimen, either of the Smew, or White headed Duck, (*Mergus albellus,*) or Hooded Merganser, (*M. cucullatus,*) was killed in the winter of 1821, but unfortunately it was destroyed by a dog. From the description given, I have no doubt but it was a Smew. The attractive and pretty piebald Goosander, (*M. merganser,*) and the wary Red-breasted Merganser, (*M. serrator;*) the former frequent, not so the latter.

Thus ends the Ducks and the Duck species, and brings us to quite a different class, namely, that of the Podiceps or Grebes, which is, I must say, very limited. Three species are however recorded, which are the Tippet, (*Podiceps cristatus,*) the Red-necked or Dusky Grebe, (*P. rubricollis,*) and the Little or Black-chinned Grebe, (*P. minor.*) This last, I am told, has been known to breed there.

* I have just learned from a gentleman in Peterhead that the Eider Duck now breeds near that town. This being the case, we may yet hear of its doing so also on some of the islands of Strathbeg.

We now arrive at the Ardeadæ or Waders, and shall commence with the Common Heron, (*Ardea cinerea.*) A few of these birds may be seen at all seasons of the year about the margins of the Loch, but ever watchful and suspicious. It is the next thing to an impossibility to get within shot, owing to the flat nature of the place. A White Heron, supposed to be an Egret, was observed on the west side of the Loch in the spring of 1816. It was seen for several days to frequent the same spot, but on being fired at once or twice, it left and did not return. A very nice specimen of the Bittern, or Mire-drum, (*A. stellaris,*) was shot in the autumn of 1824, by one of Mr. Gordon's, of Cairness, gamekeepers. Others have I believe been seen. The Spoonbill, (*Platalea leucorodia,*) has twice or thrice been observed; and the Glossy Ibis, (*Ibis falcinellus,*) once.

Of the *Scolopacidæ* two species are numerous, namely, the Common Snipe, (*Scolopax gallinago,*) and the Jack, (*S. gallinula;*) the former most abundant. Early in the mornings, and in the dusk of the evenings, Woodcocks, (*S. rusticola,*) are to be found. About fourteen or fifteen years ago, my honoured friend, the late Rev. Mr. Smith, at the time residing in Banff, and Rector of the Academy, had a very large Snipe along with some other birds sent him from that quarter. Arriving in the morning he could do little more than merely look at them, but he at once saw that the Snipe was a strange one, and on leaving for his duties, he consigned it, along with the other birds which were to be cooked, to the care of the servant, with particular orders to lay it aside until the afternoon, when he should again require it. Unfortunately, however, most unfortunately, his orders either had not been distinctly given, or else had been misunderstood, for on asking for the bird at the time specified, he was informed by the girl that he had had it already to his dinner. "What!" exclaimed my friend in amazement, "did you serve the one up that I gave you to lay aside for me?" "They were all served up Sir," was the damsel's reply. "Well," added my friend, "I would have given you any money—anything rather than you should have done what you have. It was a very rare bird; besides I have sent for Mr. E. to come and aid me in its identity, and what can I say to him when he comes? That I have eaten the bird? Most ridiculous! What will, or what can he think?" I entered at the moment, and just in time to hear the concluding part of the last sentence. The servant appeared much cast down at her mistake; and as for my friend, he was really in a sad case at the loss of the bird. I was extremely vexed myself when I learnt the circumstance, but of course there was no help. The servant girl left on my entry, no doubt glad to get away.

The bird thus so voraciously destroyed, was considered by Mr. Smith to be the Great Snipe, (*Scolopax major;*) and from his description of it, I have little or no doubt but that it was, which rendered its annihilation the greater pity, and the more to be deplored, owing to the comparative scarcity of the species in this country.

The Green Sandpiper, (*Tringa ochropus,*) the Ruff,* (*T. pugnax,*) and the Avocet, (*Recurvirostra avocetta,*) have all been obtained; but of course must rank as very rare visitors. The same also may be said of the Dotterel, (*Charadrius morinellus,*) and the Gray Phalarope, (*Phalaropus lobatus;*) four of the former, that is the Dotterel, were shot in the spring of 1852, out of a small party met with on the links near to the Loch; two of which are in my own collection, one in that of a gentleman in Fraserbrough, and the other in the possession of Crawford Noble, Esq., Jun., Savock, by whom three of the birds were killed. They were all arrayed in their breeding or summer dress.

The foregoing are what may be termed, properly speaking, the *Birds of the Loch in winter.* Of course there are several not mentioned, but which will be so when we arrive at the proper time. Those I have omitted being, in a great measure, permanent and breeding there, it is intended to rank them along with the summer birds. There are large flocks of Gulls also, as already hinted, besides other sea-fowl, which are frequently, and under various circumstances, to be met with; but as these belong, more properly, to the shore birds, they will be classed under that head, with this simple remark, that they are to be looked upon as occasional visitors to the Loch, especially the Gulls, many of which are to be seen winter and summer.

We will now take a glance at the Loch as it is in summer, and then scan the shore. As winter passes away, and spring begins, the Loch wears another aspect. Those vast hordes which have been alluded to, now become more restless. They break up, and flocks disappear daily, until all have gone, except it be a few stragglers. Several pairs of the Mallard remain and breed by the Loch and round that quarter, and appearing on the water again in the end of July with their young, are a source of great amusement to gunners. The Teal also breeds, but very sparingly.

It is summer now, and you tread the marshy margins of the Loch, where tall grasses, waterpipes, reeds, and a host of other luxuriant aquatics grow; and the shrill whistle of the Redshank, (*Totanus calidris,*) the wire-like call of the Dunlin, (*Tringa variabilis,*) the boom of the Snipe, (*Scolopax gallinago,*) and the pleasant peewit of the Lapwing, (*Vanellus cristatus,*) will never fail to salute your willing ears; and the birds themselves to become your company as you pass along. The Redshank, the Dunlin, and the Lapwing, are very numerous. The Black-headed Bunting, (*Emberiza schœniclus,*) the Meadow Pipit, (*Anthus pratensis,*) and the Reed Warbler, (*Sylvia salicaria,*) also breed in suitable localities round the Loch; the latter but few and only occasionally, the others plentiful in every season. Coots, (*Fulica atra,*) are abundant, and build amongst the water-pipes and reeds, which in certain places, are of some extent: Water-hens, (*Gallinula chloropus,*) rather scarce.

* Three specimens of the Ruff have come under my notice, as being killed in these northern parts,—the one above referred to, one at Manquhitter, which is now in the Banff Museum, and the other near Cornhill, Banffshire, by the gamekeeper of Col. Thomas Gordon.

The Whimbrel, (*Numenius phœopus,*) pays occasional visits during summer; I have seen them several times, but do not think they breed there. In the month of June, last year, I had the pleasure of meeting, for the first time, with that rare *Totanus* in this part of the country, the Greenshank, (*T. glottis.*) There was only one; and after frequenting the same place, namely, that part of the margin of the Loch beneath the farm of Rattery, for two days, it disappeared. The Water Rail, (*Rallus aquaticus,*) may be ranked as an occasional straggler, but may in some instances breed by some of the burns which feed the Loch; as also does the Water Ouzel, or Crow, (*Cinclus aquaticus,*) and the Pied Wagtail, (*Motacilla Yarrellii.*)

Swallows are abundant about the Loch, and cannot fail to attract the notice of every one. The Swift, (*Hirundo apus,*) the Barn Swallow, (*H. rustica,*) the Window Swallow, (*H. urbica,*) and the Bank Swallow, (*H. riparia,*) all breed in the neighbourhood, the Loch affording them a rich supply of food; a sand bank near by the Loch on its south side, is yearly chosen by the latter species as a nesting-place, and was this summer completely perforated by them, they were so numerous.

An individual, till recently, and for a long time, in the service of the Rev. Mr. Boyd, but at present acting as coast guardsman at the Rattery Station, was one day, about twenty-two years ago, whilst fishing on the Loch in a boat, a good deal surprised at the plunging of a *great Eagle,* as he said, near him: the bird rising again exhibited a good-sized trout in his bill. This was a large and splendid Osprey, (*Pandion haliaetus,*) and so regardless of my informant's presence, that he says he could have struck him several times with his rod.

The Roseate Tern, (*Sterna Dougalii.*) Well do I remember my first visit to the Loch, how delighted and charmed I was with its appearance. As well do I also recollect my second, from the circumstances connected with it. It was a year afterwards, namely, in May, 1849; Mr. Boyd had received word that I was to be down on a given day, and had got all things ready for an excursion on the Loch. Circumstances, however, prevented my arrival on the day appointed, and on reaching my friend Mr. Ewerdine's, I found a letter from Mr. B., stating his disappointment at my non-appearance. Next morning, however, I reached the manse, and for the first time beheld the smiling and benevolent countenance of the minister of Crimand, and received a most hearty welcome from him. Such was the reception given, that I was entirely overpowered by the kindness of the Reverend gentleman, we being then entire strangers to each other. I learned with regret however, that the individual who had been engaged to work the boat for me the previous day, was not now to be had; but, as no other one could be got that day, I had at the same time the pleasure of being told by Mr. B., that he would go himself and assist me as far as he could. This was glorious news.

I have already hinted that there are islands on the Loch. Of these there

are four, if I recollect rightly, but none of them of any extent, the largest containing only, perhaps, about two acres. To visit these islands was now my object. Accordingly, and after a short walk, we soon reached the boat which we entered, that is, Mr. B., a boy, and myself, and pushed off on our mission. Being no rower however, I was very soon knocked up, as also was the little fellow. Seeing which the Rev. gentleman took the oars himself, and with a little aid from the boy, acted the part of the working man, at least that day, by rowing the humble souter naturalist all over the Loch, whilst that personage sat gentleman-like at his own ease with gun in hand ready for any emergency which might cast up in the shape of a *rara avis*. I shall never forget Mr. B.'s condescension on that occasion. It was one day whilst opposite Cairney's boat-house, and Mr. B. pulling away at the oars, that I shot a most beautiful specimen of the above-named Tern. There was only one. The rosy tint of the breast was very conspicuous when newly killed.

We landed on the islands where we found only a few nests of the Coot, Redshank, and Dunlin. The Black-headed Gull, (*Larus ridibundus*,) and the Arctic Tern, (*Sterna arctica*,) both breed on the larger island, but we found none of their nests on this occasion, but have done so since. I have been credibly informed by parties who have themselves been eye-witnesses of the fact that at one time, say about twenty years ago, the birds were so numerous on these islands during the breeding-season, that it was hardly possible to set a foot down without treading on their nests. How different now. This was during the late Mr. Gordon's time, of Cairney. The birds were then protected, and as the Loch was his, no one durst go to the islands without his permission, except at their own peril. All can go now however, who have, or can get the means, if a gun is not openly in the play. A number of the farmers are now possessed of boats. With these their servants from the herd even up to the grieve, have easy access to the islands on any part of the Loch, and the lamentable fact is that as soon as the eggs are laid, they are as sure to be pilfered by these individuals, and others, who I believe in many instances convey their booty to Peterhead, where they sometimes obtain eighteen pence per dozen for the larger species. The consequence is that perhaps there is not one bird now where there used to be fifty. Driven and forced away by such wholesale destruction of the eggs, and cruel persecution, they are gone to seek a summer home somewhere else, where they may rear their little ones in greater security. It is a great pity that such a low, mean practice is thus allowed to be carried on year after year. Surely if any one possessed of the least influence in the neighbourhood would but plead the cause of the poor persecuted birds in the proper quarter, a stop, or something like a check would be put to it. That such a one will yet, and that too very soon, spring up, and that he may be successful, I do sincerely hope.

The eggs of the Great Black-backed Gull have been found on the larger island, as also the eggs of other birds which are not now to be met with

there. On one of my visits I remember once seeing a nest of the Black-headed Gull placed amongst the tall reeds like that of the Coot's, and which could not be approached but with a boat; and had it not been for the eggs, it might very easily have been mistaken for the nest of the latter bird.

(To be continued.)

THE RING OUZEL.—INLAND MIGRATION.

BY O. S. ROUND, ESQ.

The fact of ordinary migration, by which is understood the movements of our Summer Birds of Passage, is so notorious that it is not necessary to be a naturalist to be not only aware of the circumstance, but to point out which are our Summer Birds, and to have a tolerably accurate idea when they arrive, and when they depart. But the case is very different with winter migration, or inland migration, the knowledge of these depends upon an intimate acquaintance with the habits of our feathered inhabitants, the result of careful observations. Those whose occupation is in the fields, however ignorant, scientifically speaking, they may be, have still a knowledge, necessarily of many things, as yet perhaps unknown to professors; for natural science must be learnt from nature, and nature cannot be studied in the Library, nor her wonders discovered by consuming the "midnight oil;" it is only by breathing the pure air of Heaven in the solitary places of the earth—by being one rational amid multitudes of irrational and inanimate productions of the Great Creator, that we can become aware of the habits or conformation of each.

Thus I remember very well when I was a boy, talking with a very aged man in our village, about the various birds which were visitants at various periods, and he particularly mentioned the regular periodical visits of the Ring Ouzel, (*Merula torquata*,) at Lady-Day and Michaelmas, attracted as he considered by a kind of food to be met with only at those times in this locality, and not probably to be found in the locality from which they came; and he particularly mentioned that he thought that mountain ash berries in the autumn, and ivy berries in the spring, were their chief attraction. This man was a stone-cutter, and had been a notorious poacher, and many a tale of hairbreadth escapes from His Majesty's keepers in Windsor Park, could he relate. He was, as I was then, ignorant of all works on Natural History, but, as in the year 1820, he was upwards of eighty years of age (he lived till the year 1827,) and spoke of the circumstance as one which he remembered ever since he was a boy; and Gilbert White, who first observed it, did not do so until 1768, it follows that it was known to this inhabitant of the wilds much earlier, and he gave exactly the same reason as White gives for this periodical journey. Thus we have a strong confirmation of the Selbourne Historian's correctness. It is needless to say that their migration is now well known, and I have myself seen and shot specimens at these periods.

White says that the Ring Ouzel is bigger than the Blackbird; for bigger, I would have it read, plumper; and it has one peculiarity, namely, that it runs, and does not hop, as most of its genus do. Its note more resembles a chatter, than the chirp of a Blackbird, and its flight is nearly continuous, not swift, nor desultory, and generally high; indeed it is probable that it is more used to long flights than any of its congeners, and hence arises this peculiarity.

Many people have considered that it is but a variety of the Common Blackbird, but, although strikingly similar in general appearance, when examined in the hand, the distinction is very obvious; there is a vast deal of gray in the plumage, every feather almost having an edging of that hue, and this is a good deal mingled with brown in the hen birds, whilst some of the cocks, from the pure white of the crescent on the breast, and the blackness of the rest of the plumage, are very pretty birds. There is no doubt that if the Ring Ouzel is common in any country, that is not Great Britain; for, although it has been said to breed in North Devon, I have never been able to meet with direct evidence. All the Thrush kind flock in autumn, and hence they are with us for a longer period at that season because food is more plentiful; indeed, as I have elsewhere observed, it is the *food* which operates more than anything on the habits, and appearance, and temper of birds; and by that standard, in my opinion, they can only safely be classed.

London.

THE FINDHORN HERONRY.

BY J. LONGMUIR, ESQ., JUN.

A Heronry is a most interesting sight to an ornithologist, and one of the best in Scotland—rather, in Britain—is the Findhorn Heronry. Living for a short time in Forres, which is between four and five miles distant from it, the writer determined to see it; and, accompanied by a young friend, Mr. H. Macrae, who volunteered to act as guide, started on Monday, August 21st., at the hour agreed upon. Passing through the west end of Forres, and crossing the bridge which spans "the burn," we turned up the Granton road, the sides of which were bordered, not by unseemly stone dikes, but by fresh-looking hawthorn. Occasionally a Wild Rose peeped through the leafy hedge, the foot of which was intertwined with the Yellow Bed Straw, (*Galium verum*,) and here and there besprinkled with the bright-looking Vetch, (*Lathyrus pratensis*,) and its well-known cousin *Vicia cracca*. The strong-scented Yarrow, or Nosebleed, (*Achillea millefolium*,) the leaf of which, loosely rolled together, and put up the nostrils, "causes, by an external blow of the finger, a bleeding at the nose," contrasted well, in its stiff erectness, with the humble tremulous Bluebell of Scotland, (*Campanula rotundifolia*.)

But the Hawthorn hedging and the green fields speedily gave place to the Granton woods, which passed on both sides of the road. As they occasionally

opened up, we had glimpses of the ripened corn, the pleasant country-seats, the forest of Darnaway, and the Moray Frith. Between the wood and the road, there rose a heather-fringed bank, on the green slope and purple top of which, the eye, tired with the dull monotony of a muddy road, rested with pleasure. This bank was thickly studded with Fungi of all sizes, shapes, and colours, from the large dark brown Fungus, that sat close by the road, to the delicately white one, that had sheltered itself in some slight hollow. The fir wood, usually sombre, seemed really to have a more cheerful look when the bright blooming Heather, (*Erica cinerea*, and *tetralix*,) predominated; but assumed a still grayer look when that national favourite gave place to the equally common Ling, (*Calluna vulgaris.*) Again the Heather came in as the Ling went out, carpetting the woods with its thick-clustered bells; patches of bright yellow moss giving a pleasing variation to the whole. As the trees began to separate and to thin, a miniature loch, dimly at first, but soon quite distinctly, came in sight. It looked very pleasantly with its calm, glassy surface, dotted in every direction by well-wooded islets, and encircled by healthy trees. Leaving it behind, we passed to thinner woods, and more irregular ground, on which Whins, (*Ulex Europæus*,) and Brambles, (*Rubus fruticosus*,) seemed to luxuriate.

Every now and then there fell a short, pattering shower; every now and then the birds commenced a twitter, or attempted a warble; and every now and then the Jackdaws chattered;—with these exceptions, Nature was very unmusical this morning. By and by, the road and our feet brought us to Altyre, the seat of Sir William Cumming, the father of the Nimrod of South Africa. Glancing at the neat porter's lodge, and the flower garden attached thereto, we entered the woods of Altyre. Instead of—or rather, besides—the fir trees that had hitherto predominated, there were oak, beech, birch, elm, and larch trees in abundance, and in full foliage. At the branching of the roads, we took the one that led towards the Findhorn, which resembled more the well-kept avenue to a nobleman's residence, than a common highway; so smooth was the road, so neat the side paths, and so fine-looking the stately trees.

At last an old gate, spotted with lichens, yellow, white, and gray, made its appearance; crossing it, we found ourselves traversing a grass-grown cart-road, with a canopy of oak boughs overhead, and heath and ferns on each side. The path soon took a sudden turn—so did we; and began to descend the sloping way. A few windings and turnings past, we came to the Findhorn, which, in serpentine contortions, flowed at the foot of the high bank on which we were. A little way down on the opposite side of the river, and on a level plain, stood a company of trees, stretching up and down along the river bank. In the midst of this group rose several gray, old trees, conspicuous from their height; their bare, whitened boughs marked them out still more distinctly from their neighbours; and it only required the croak of the wary Heron, which issued from the midst of them, to settle the position

of the Heronry. The view of the Heronry from this point not being very good, we strolled up the river, reserving a minute examination till, passing down the river side, we arrived at the best position for a good view. The left bank, by which we wandered, is very steep, thickly covered with heath and moss, and wooded to the river's margin; farther down, the bare cliffs, with an occasional red-berried mountain ash clinging to the rock, stand out boldly; but as the river flows on, the banks become more level, and more thickly wooded.

Passing along the pathway, some delicate-looking Orchis plants and the pretty variegated flowers of the Common St. John's Wort, (*Hypericum perforatum*,) attracted attention. Soon after, entering a gate which brought us into the grounds of Sluie, of which we were duly apprized by an immense board, covered by an equally large notice, to caution travellers, and especially such as carried guns or were accompanied by dogs, against trespassing, we continued our walk and our conversation. The opposite banks now became very precipitous, while every bend of the river brought some fine view—some strange appearance of the shelving rock, or some bend of the stream in sight. Altogether, the brown river edged by snow-white pebbles, the pale red sandstone rocks, the noble spreading larches, an occasional slow-flying Heron, that old favourite—the 'dark creeping Ivy,' the stately Foxglove with its pyramid of bells, the spreading Fern, the white-flowering Bramble, the bright-looking heather, and the deep blue sky, made up quite a picture. In a short time, the path descending rapidly, led past a saw-mill, and speedily brought us to the bank again. How gloomy did the river appear where the dark cliff was reflected on the dark waters; how pleasant was the sparkle of the waters where cliffs gave place to trees, and shadow to sunshine. But here ended the stroll in this direction. So down by the old path we wandered, picking up a Forget-me-not here, and lingering to look at the bright yellow flowers of the Potentilla, (*Potentilla reptans*,) there, as they crept along the forest path, which was bestrewed with the dead leaves, which every puff of wind rained from the trees; and as each leaf fell, it "bade man think on his end."

But here—where a white-branched birch stretches up, in form of a Y—is the best point from which to view the Heronry. A more extraordinary sight it would be difficult to imagine. High up, the spectator looks down upon a number of ancient, moss-grown trees, principally oak, that stand amidst a number of fresh-looking companions, bounded by the river on the one side, and by a meadow, which separates them from the woods of Darnaway, on the other. On these aged trees, the Herons have for years resided: one tree especially stands boldly out from among its fellows. Many a sun has shone on it; many a winter's snow bedecked its leafless arms. It is forked and branched in every direction; and the branches are weighed down by the nests that have been constructed on every possible part of it. At every fork, on the top of each bough, and at the summit of the tree itself, there is a nest.

The nests, too, are curiosities in their way; at this time they resembled huge straw doormats, (*basses Scoticé,*) stretched over the branches, or curved up where the boughs spring from the parent trunk; their general appearance in spring resembles, according to Mr. Miller, "the wigs of the Court of Session." They are renewed and slightly repaired by their occupants as they return to breed here annually, without molestation. There were about thirty nests in all, some of which were unoccupied, while various individuals sat or perched on the others. A parent bird sat in one—an 'old inhabitant' stood on the side of another—four young ones stood silent on a distant nest, while, as we gazed, a very unsettled-looking character arrived—dropped on his nest—looked about him—rose—croaked—spread his wings—made a tour through the colony —attempted with great gravity—much flapping—and very little success to balance himself on the top shoots of a neighbouring larch—and at length with a flap and a croak, started down the river. The scene was one of restlessness and bustle; and though very many of the Herons had left, those that remained seemed to do their best in the way of keeping up a stirring appearance about their settlement.. The best time for seeing them however was long past, when the tricks of the Jackdaws, and the clamour of the Herons, with the cooings of the Wood Pigeons, and the sweet warblings of the birds, give the whole scene a very lively aspect. On the opposite side from the Heronry, a small company of Peregrines and other Hawks reside, but, except a slight alarm as they pass over the Heronry, do no mischief to their long-legged neighbours.

Leaving the Heronry, we turned down the river, passing several Butterflies in the height of enjoyment. They were difficult to catch, as they were so quick, or, perhaps, their pursuers so slow. The pleasantly-shaded path led us into the wood, but speedily returned to the Findhorn. Turning down by another way, the eye was attracted to one of the most pleasant of our British plants, the Eyebright, (*Euphrasia officinalis,*) whose delicately-streaked flowers and modest appearance never fail to delight us. We were much struck with it in one locality in particular—when wandering near Dunnottar Castle we came upon a considerable patch, where many years before, the Rev. Mr. Longmuir discovered it in great abundance. Many is the 'sunny memory' of the past which it brings up in the solitude of the granite city. "A thing of beauty is a joy for ever."

But here, a considerable way farther on,

> "The hazel hangs
> With auburn branches, dipping in the stream
> That sweeps along, and threatens to o'erflow
> The leaf-strewn banks;"

And here also, stands an old wooden house, the walls covered, inside with inscriptions, outside with lichens, puff-balls, and spiders. The river has been gradually widening, and the plain spreading out on both sides; a fine level ground at no great distance, entitled the 'Mead of St. John,' having been at one time famous for its tilts and tournaments; but ripe grain now waves

where, in the ancient time, cavaliers displayed their persons and their prowess. A gradual ascent has brought us to the lime-kilns of Copt Hall, from which a very fine upland view may be obtained. Here there appeared struggling for an existence among the sand, the delicately-tinted Rest-harrow, *(Ononis arvensis,)* whose tenacity to the soil has given it its common English name, as well as Scotch designation of 'sidfast,' (that is, sitfast.)

After a few more turns and windings the public road was gained, and in a short time the day's ramble was over. Thus came, continued, and closed a most pleasant stroll, the bright remembrance of which will not soon fade from the memory.

Aberdeen, 1854.

LOCAL JOTTINGS.—No. 14.
DORCHESTER—DORSETSHIRE.

BY JOHN GARLAND, ESQ., MEMB: ENT: SOC:, MEMB: WERN: CLUB.

The Tree Wasp, (Vespa Britannica.)—This rare little denizen of the southern parts of our island, is seldom met with near Dorchester; indeed, I have never myself had the good fortune to find any of them, but a short time since an instance of their building here has fallen under my observation, which I hasten to remark upon. A gentleman, Herbert Williams, Esq., of Stinsford House, near this town, discovered a nest of these little animals built at the extremity of a branch of a fir tree, over a pond in his garden. The gardener took the nest, after stifling the Wasps, and unfortunately burning, in the operation, about one-fourth of the nest, which, but for this, would have been very perfect. Even as it was it caused quite a sensation in a shop window in our High-Street, where it was exhibited; many persons having gone to see it. He has kindly made me a present of it. Many of the interesting little creatures have since issued from the cells, having survived the burning which killed their fellows. The larvæ were all dead. The formation and structure of this nest are nearly like that of the Common Wasp, *(Vespa vulgaris.)* it being formed of similar paper-like materials; and it is really wonderful to observe how well adapted was the branch for the protection of its fragile burden; the leaves depending so as to shoot off the rain as much as practicable: instinct in this respect being more certain in its results, than the most studied calculations could possibly have foreseen and guarded against. The habits of all the *Vespidæ* are well worth watching, and there is a remarkably interesting account of some of these animals, written by Mr. Gosse, the author of "The Aquarium," and other works, in the "Zoologist," of the year 1844. More observations and notes of the genus *Vespa,* would, in my humble opinion, be a desideratum in Natural History.

Common Wasp, (Vespa vulgaris.)—The nests of this Wasp are commonly found under banks of rivers, and in fields, etc.; but amongst the unusual

places I remember to have seen them in, were, once in the interior of a barn, under a rafter in the roof; and another time in a hole in the ground in which a pile or stake had been driven for hurdles, and afterwards taken away.

The Water Rat, (Arvicola amphibia.)—I know an authentic instance of one of these harmless little animals having been seen to catch and kill a large frog by the side of a stream at Winterborne Zelstone, in this county, on August 1st., 1854. It is said not to be at all carnivorous, but I believe the above to be correct.

Dorchester, September 12th., 1854.

ROLLESBY GULLERY.

BY T. SOUTHWELL, ESQ.

The Rev. Richard Lubbock, in his "Fauna of Norfolk," speaking of the Black-headed Gull, (*Larus ridibundus,*) says, "A small colony took possession formerly of the margin of Rollesby Broad, but I do not know whether they were suffered to remain unmolested." Early in June last, I made a bird-nesting excursion to the "Broads," as the fine sheets of inland water laying in the North-eastern part of Norfolk are provincially called; and there, for the first time, had the exquisite pleasure of seeing a Gullery.

My first inquiry, upon arriving at Rollesby, a village about eight miles from Yarmouth, was, if the Gullery mentioned by Mr. Lubbock was still in existence, and I was delighted to learn that it not only still existed, but was rapidly on the increase; indeed, I need hardly have asked the question, the number of these elegant birds which were gracefully skimming over the Broad, or resting upon its surface, clearly indicating that their nesting-place could not be far distant. Early next morning, I started on my visit to the Gullery, and as I walked through fir plantations, skirting along the margin of the waters, I learned the following particulars from the keeper.

The Broad of which Rollesby forms part, consists of about four hundred acres of water, bounded by low swampy land, and in some parts skirted with fir plantations. Many years ago, they bred in one of the inlets of this Broad in considerable numbers, but were so disturbed, that they gradually deserted the place. About five years ago, five or six pairs re-appeared at the old breeding-place, and these, having been protected, and allowed undisturbed possession of the spot have rapidly increased in number, and now form a very flourishing colony. The keeper had discontinued taking their eggs for this season, and many of the birds had begun to sit. Arrived at the margin of the Broad, I entered a flat-bottomed boat, and made my way with difficulty amongst the patches of bulrushes and sedge.

The scene was now most exciting; hundreds of these beautiful birds, at other times so difficult of approach, were flying over our heads, and at times dashing boldly past, within two feet of our faces, venting their anxiety in loud

and incessant cries. The nests contained two or three eggs, (I did not see one with four,) and were built of flags and sedge upon the dead leaves of the bulrushes, where they were broken down and lay upon the surface of the water. Some of the nests were very carefully built, and raised high above the water; others were very slight, and in one instance, there was so little nest, that the egg actually touched the water.

The eggs varied exceedingly; in some the ground colour was brown, the spots being of a darker shade of the same colour; others inclined to green, with spots and blotches of reddish brown; one beautiful variety had the ground colour a very light greenish white, blotched with two shades of rich brown. Eggs entirely white are sometimes found. During our stay the whole colony seemed on the wing, dashing around our heads, uttering anxious and unceasing cries; many of them followed us, 'mobbing' most furiously to a considerable distance from their nesting-place.

There is a much larger Gullery at Scoulton Mere, near East Dereham. There, as many as thirty thousand eggs are taken annually; one year produced forty-four thousand. In this neighbourhood the Black-headed Gull is found during the whole summer; parties from Scoulton wandering thus far in search of food. The common name here is 'Scoulton Bird;' at Rollesby, they are called 'Cobbs.' An authentic list of the breeding-places of this bird would be interesting, and might easily be formed, if your subscribers would record such as have come under their observation.

Will you allow me to add that I shall be happy to obtain for any of your subscribers who may require them, specimens of the eggs of this bird.

Fakenham, Norfolk, September 16th., 1854.

LIST OF ALGÆ GATHERED IN THE NORTH OF IRELAND.

BY WILLIAM SAWERS, ESQ.

As a list of the Algæ gathered in the Loughs Foyle and Swilly, north of Ireland, might be interesting to some of your subscribers, I now hand you a list of those gathered these few years past, a few only of which were procured in other neighbouring localities in the north.

MELANOSPERMEÆ:—

Halidrys siliquosa.
Cystoseira fibrosa, (Portrush.)
Fucus vesiculosus.
" serratus.
" canaliculatus.
" ceranoides.
" nodosus.
Himanthalia lorea.
Desmarestia ligulata.
" aculeata.
" viridis.
" pinnatinervia.
Arthrocladia villosa.
Sporochnus pedunculatus.
Alaria esculenta.

Laminaria digitata.
" bulbosa.
" saccharina.
" Phillitis.
" fascia.
Chorda Filum.
" lomentaria.
Haliseris polypodioides.
Taonia atomaria, (only one large and beautiful specimen, in good condition, floating, summer of 1853.)
Dictyota dichotoma, and var.
Stilophora rhizodes.
Dictyosiphon fœniculaceus.
Asperococcus echinatus, and var.
Litosiphon pusillus.
" Laminariæ.
Chordaria flagelliformis.
Mesogloia vermicularis.
" Griffithsiana.
" virescens.
Leathesia tuberiformis.
Elachistea fucicola.
Myrionema strangulans.
" punctiforme.
Cladostephus verticillatus.
" spongiosus.
Sphacelaria scoparia.
" plumosa.
" cirrhosa.
Ectocarpus siliculosus.
" Hincksiæ.
" tomentosus.
" pusillus.
" littoralis.
" longifructus.
" granulosus.
" sphærophorus.
" brachiatus.
Myriotrichia clavæformis.
" filiformis.

RHODOSPERMEÆ:—

Odonthalia dentata.
Rhodomela lycopodioides.
Rhodomela subfusca.
Rytiphlæa thuyoides.
Polysiphonia urceolata.
" formosa.
" stricta.
" fibrata.
" elongella.
" elongata.
" violacea.
" fibrillosa.
" Brodiæi.
" nigrescens.
" atro-rubescens.
" fastigiata.
" parasitica.
" byssoides.
Dasya coccinea.
Bonnemaisonia asparagoides.
Laurencia pinnatifida.
" cæspitosa.
" dasyphylla.
Chrysimenia clavellosa, and var.
Chylocladia ovalis.
" kaliformis.
" articulata.
" reflexa. (Of *C. reflexa*, doubtful specimens, were submitted to some eminent Algologists, who did not decide *pro* or *con;* since then two very characteristic specimens have turned up which had been overlooked.)
Corallina officinalis.
Jania rubens.
Melobesia ..... ?
Hildenbrandtia rubra.
Delesseria sanguinea.
" sinuosa.
" alata.
" Hypoglossum.
" ruscifolia.
Nitophyllum punctatum.
" laceratum, (with some undecided yet.)

Plocamium coccineum.
Rhodymenia bifida.
" liciniata.
" ciliata.
" palmata.
Gracilaria confervoides.
Hypnea purpurascens.
Gelidium corneum, (var.)
Gigartina acicularis.
" mamillosa.
Chondrus crispus.
Phyllophora rubens.
" membranifolia.
Gymnogongrus plicatus.
Polyides rotundus.
Furcellaria fastigiata.
Dumontia filiformis.
Halymenia ligulata.
" var. latifolia.
Ginnania furcellata.
Kalymenia reniformis.
Iridæa edulis.
Catenella Opuntia.
Gloiosiphonia capillaris.
Nemalcon multifidum.
Ptilota plumosa.
" sericea.
Ceramium rubrum.
" Deslongchampsii.
" diaphanum.
" flabelligerum.
" echionotum.
" acanthonotum.
" ciliatum.
Griffithsia equisetifolia.
" corallina.
" setacea.
Callithamnion plumula.
" Turneri.
" pluma.
" tetragonum.
" Hookeri.
Callithamnion roseum.
" byssoideum.
" polyspermum.
" Borreri.
" corymbosum.
" spongiosum.
" Rothii.
" floridulum.
" Daviesii.

CHLOROSPERMEÆ:—

Codium tomentosum.
Bryopsis plumosa.
Vaucheria velutina.
Cladophora pellucida.
" maccallana.
" Hutchinsiæ.
" diffusa.
" rupestris.
" lætevirens.
" gracilis.
" albida.
" lanosa.
" arcta.
Conferva—several species, some undecided.
Enteromorpha intestinalis.
" compressa.
" Linkiana.
" erecta.
" ramulosa.
Ulva latissima.
" Lactuca.
" Linza.
Porphyra laciniata.
" vulgaris.
Bangia fusco-purpurea.
Rivularia atra.
Calothrix confervicola.
Lyngbya majuscula.
" ferruginea.
Several species of Diatomaceæ.

In addition to the above list of Marine Algæ, I may note a few Fresh-water ones gathered in this locality; but may add that my attention has not

been particularly directed to this department, otherwise, I have no doubt, the list would be considerably extended. Nomenclature according to Dr. Hassall.

Vaucheria dichotoma.
Lemania fluviatilis.
Chætophora elegans.
Draparnaldia glomerata.
Batrachospermum moniliforme.
" atrum.
Zygnema rivalare.
" pellucidum.
With some other species.
Chara vulgaris.
Mesocarpus.
Staarocarpus.
Vesiculifera, several.
Of Desmids I may note
Glæoprium dissiliens.
Desmidium Borrerii.
Closterium Dianæ.
Cosmarium margaritiferum.
" Botrytis.
Trogonocystis mucronata.
" orbicularis.
Staarastrum tetraceum.
Closterium Grenbergii.
" moniliferum.
" striolatum.
" setaceum.
Mierasterius rotata.
Euastrum didelta.
" affine.
Also a considerable number of species of Diatomaceæ.

Londonderry, May 11th., 1854.

Miscellaneous Notices.

Hybrid between Anser Leucopsis *and* Anser Canadensis.—I have to bring before the readers of "The Naturalist," should you think this worth insertion, the occurrence of a hybrid between *Anser Leucopsis*, (Yarrell,) and *A. Canadensis*. I had the pleasure of seeing the bird several times myself, whilst on a visit at a gentleman's estate in Sussex. In this instance, as in that so pleasantly told by Waterton, the worthy pair are "Mopsus and Nisa," while their offspring, now full-grown, is half-way between the two, having considerably outstripped its sire, but not attained to the maternal stature and portliness. The bird in question so completely resembles the one described by that "entertaining naturalist," that it would be presumption in me to attempt to add anything. I would only observe that the principal differences observable between the three birds, are, firstly, the amount of white on the head; secondly, the prevailing colour of the plumage—in the Bernacle, bluish gray and white, in the Canada, a more sepia-coloured ash, and in the hybrid, a mixture of the two; and thirdly, the colour of the breast, the black of which, in the hybrid, instead of being continued towards the lower part of the body, as in the Bernacle, or terminating in a ring round the neck, as in the Canada, is gradually shaded off to a dusky white. The bird is not so handsome as its mother, nor so smart as its father, and is therefore, in my opinion, less ornamental than either. —Alexander D. Mather, Northampton House, Camberwell, August 24th., 1854.

Red-necked Phalarope, (Phalaropus hyperboreus.)—A fine specimen of this very rare bird was shot at Wilberfoss, near York, on the 2nd. of June, in full summer dress. It was swimming in a pond near a house, along with some tame Ducks. It came into my possession.—David Graham, York, June 21st., 1854.

Tufted Duck, (Fuligula cristata,) *breeding in England.*—I received the eggs of this Duck from F. J. Foljambe, Esq., of Osberton Hall, for the purpose of blowing them: he found the nest near that place. The nest was arched over, so that there was only room for the bird to pass in and out. The eggs were seven in number, of a dark olive-colour, and very thick at the broad end. This is the first instance of this bird breeding in England.—Idem.

On the Note of the Cuckoo, (Cuculus canorus.)—8. 30, P. M., May 22nd., 1854.—I have just been listening to three Cuckoos singing. Two sang in the usual manner—'cuc-koo, cuc-koo,' but the third repeated the first syllable twice, thus 'cuc-cuc-koo,' and this many times in succession; occasionally varying it by the ordinary two-syllabled note. This bird was very near to where I was standing, so that it was impossible for any mistake to have been made. May 29th.—Since the above was written, I have had frequent opportunities of hearing the same bird sing its peculiar song. It usually begins by one or two of the ordinary two-syllabled notes, and then follow from eight to a dozen of the three-syllabled notes. The Cuckoo seems to be unusually abundant here, as three or four are commonly to be heard singing at the same time. I heard the Cuckoo for the first time this year on the 4th. of May, at Watton, near Driffield; and I am informed by my friend, D. Ferguson, Esq., of Redcar, that he first heard it on the same day at that place. June 20th.—I have continued to hear the Cuckoo with the anomalous voice up to this day.—B. R. M., Stonefall, Harrogate, June 20th., 1854.

Notice of the Night Jar, (Caprimulgus Europœus,) *near Barnsley*.—While walking on the morning of the 18th. of May, in the meadows on the lower side of the Aqueduct, in quest of a specimen of the *Tree Sparrow*, to assist some youthful inquirers in discriminating this from the *House Sparrow*, the dogs disturbed a large bird among the gorse and thorn bushes in the angle between the Aqueduct and its furthest buttress; it was some time after my companion noticed it in taking wing, and then it clung to the ledges in ascending; when the bushes were cleared, it swept with a light circling flight into the neighbouring copse, something in the manner of the Hawk tribe;—though a white patch on its inner wing feathers distinguished it from that family, or the Cuckoo. "Now," said my companion, "we may secure it, it appears a young bird from its hesitating manner of taking to flight, but I suppose if a Kestrel I am not to kill it." I replied that "I was unwilling to aid in the extermination of the doomed race of Hawks, but I could not dictate." Whilst I was examining the thick bushy places where it had apparently been harbouring, I heard the crack of his gun reverberating from the bridge wall, and among the arches. I hastened at his call to secure the dogs; and we picked up a bird, too much shattered from the nearness of the discharge to be fit for preservation, which from its peculiar bill, fringed with small bristles—its serrated middle claw, and reversible hind one; together with its finely mottled plumage, delicately pencilled with light gray and yellowish brown tints, was pronounced at once as the Goatsucker, or Fern Owl. I had formerly observed this bird in Sherwood Forest, but never in this part, and *was glad to record one more rare bird for this district;* yet with compunction that so innocent and beautiful a creature should be thus profitlessly sacrificed. It was perched along and close to the branch, as described by Yarrell, Morris, and other writers; the locality among stony whin covers and ferny copses; and its hesitating manner when startled by daylight, all accorded with their descriptions. We since learn that it has some years back been heard to utter its jarring note, from which it obtains two of its names—Night Jar, and Dor Hawk,* about the fern-clad quarries of Dark Cliff, in Worsbro' dale. In addition to the instance of the Night Jar, or Goatsucker observed May 18th., another was brought me to name, shot on the 30th. May, in the woods near Silkstone; another had been procured in the same neigbourhood, and stuffed without the species being made out. One also was shot near Carlton, about the close of April, date not remembered; this must have been a very early arrival, as the bird is one of our latest summer visitants. The bird-stuffer who preserved this specimen, shot one fifteen years ago in Shaw lane, near this town. The late Dr. Farrar had one in his complete collection of British Birds; my informant cannot tell me where procured--it is supposed to have been shot in the direction of the moors. Specimens have been procured in Wharncliffe.—T. Lister, Barnsley, May 29th., 1854.

Thrushes feeding on the backs of Sheep.—As we should not disdain to notice the most trivial facts that may be brought under our eye, I may inform you that on walking in the country to-day, I observed considerable numbers of the Common Thrush alight on the backs of Sheep, chiefly Lambs, and immediately commence picking and eating the parasites contained there. The weather has lately been oppressively warm, and the Lambs appeared to experience relief

* From an old word signifying *buzzing*, also applied to the Beetle, which this summer visitant preys upon. This bird is also called *Churn Owl*, and *Wheel Bird*.

from the service done them by the birds. It may be a common enough occurrence, but as it may be new to some of your readers, as well as myself, I think it worth placing on record in your valuable and interesting Magazine.—JOHN ROSE, M. D. R. N., Haslar Hospital, August 3rd., 1854.

Little Stint, (Tringa pusilla.)—A specimen of this bird was shot in company with Redshanks, at Willingham Fen, Cambridgeshire, May 13th., 1853.—S. P. SAVILL, 13, Regent Street, Cambridge.

Great Ash-coloured Shrike, (Lanius excubitor.)—A fine old specimen of this bird was killed at Stretham, Cambridgeshire, November 13th., 1853.—Idem.

Red-breasted Merganser, (Mergus serrator.)—A pair of these birds in adult plumage was shot at Priewillow, Cambridgeshire, April 20th., 1854.—Idem.

Hobby, (Falco subbuteo.)—An old male specimen was shot at Cherry Hinton, Cambridgeshire, May 16th., 1854.—Idem.

Appearance of the Hirundinidæ, etc., at Bawburgh Hill.—Window Swallow, (*Hirundo rustica,*) May 10th. House Martin, (*Hirundo domestica,*) May 24th.—The former of these birds was thirty-one days, and the latter seventeen later than last season. The Swift, (*Cypselus murarius,*) May 31st.; being sixteen days later. Sand Martin, (*Hirundo riparia,*) April 7th.; being twelve days earlier. The Nuthatch, (*Sitta Europæa,*) March 29th.; being two days earlier. The Cuckoo, (*Cuculus canorus,*) April 20th.; being three days earlier. The Gray Wagtail, (*Motacilla boarula,*) April 4th.; being fifteen days earlier. My first nest in 1853, was a Hedge Sparrow's, found on March 23rd. This year, I had my first on March 31st., and found also a Robin's, and a Blackbird's with eggs in, and a Water Ouzel's with one egg, which instead of securing, I left till the prize should be worthier, and thus I lost my object, for stranger hands plundered it. These are my last notes entered at Bawburgh Hill—a spot endeared to me, but to it I have said "a last farewell."—GEORGE R. TWINN, The Elms, Mosely Road, Birmingham, August 11th., 1854.

Note on Sirex Gigas.—In your July number you mention the *Sirex Gigas* as taken in Surrey, Hampshire, Dorset, and Somerset. I have taken it in Gloucestershire and Devonshire; two in the first and one in the latter county, all females, and engaged in boring wrought fir timber.—WILLIAM T. LANE, Somerset House, Clifton, Bristol, August, 1854.

Occurrence of the Opah, or King-Fish near Buckie, Banffshire.—A very large and splendidly-marked Opah, (*Lampris guttatus,*) was found among the rocks near the above place, on the 5th. inst., by some fishermen. It was sent to London.—T. EDWARD, Banff, August 26th., 1854.

Prunella vulgaris *with White Flowers.*—I found a plant of the above this summer, and also *Pedicularis sylvatica* with white flowers. I am not aware of the latter having been recorded in "The Naturalist,"—both I believe are of rather rare occurrence.—S. CAMERON, Beldoeney, Banffshire, August 24th., 1854.

The Querist.

I see by "The Naturalist" for this month, that T. J., of Tottenham, asks whether the notion is correct of the oviparous and viviparous breeding of the *Aphis*, and also at *what rate* the *Aphis* is supposed to breed. As I am not an entomologist, I cannot speak on this subject from my own knowledge; but I trust that the following extracts from Dr. Carpenter's admirable work on Physiology, "The Principles of Physiology, General and Comparative," will prove satisfactory to your correspondent. Dr. C., in speaking of this class of Insects, says, "Insects are endowed with extraordinary powers of multiplication; but this is accomplished, with only one exception, by means of the sexual process of generation. The exception referred to is that of the *Aphis*, which is capable of propagation by a process that appears to be analagous to the gemmation of the *Salpæ*, (belonging to the class *Tunicata;*) the new individuals being budded off, so to speak, from internal stolons, instead of being developed from ova provided by the female, and fertilized by the male. This method of propagation may be several times repeated; the individuals thus generated being all apparently of the female sex, and generating others

like themselves. At the end of the season, however, perfect winged males and females are developed, and these concur to produce ova, which retain their vitality through the winter, and give birth to a new generation in the spring, long after the parents have perished. Each viviparous *Aphis* is capable of producing a hundred repetitions of itself, and as the process may be repeated ten times in the season, it has been calculated, that, if no destructive agencies were at work, the last brood would number 1,000,000,000,000,000,000, (say one trillion,) individuals." And again, in his chapter on the "Reproduction in Animals," he says, "It is very remarkable that in animals so highly organised as Insects, we should find a very marked example of gemmiparous multiplication, occurring as part of the regular history of the race. Such, however, is only the case in the genus *Aphis*, the curious history of whose double method of reproduction, has been already detailed. Now, when we compare this series of phenomena with those of a similar kind which have already occupied our attention, it becomes obvious that this is a case of *larval gemmation*, and that, notwithstanding the long succession of broods of 'zooids' which may be thus produced, the generation cannot be said to be completed, until a perfect pair of male and female *Aphides* shall have been evolved, capable of continuing their race by the process of true sexual generation. This evolution may be postponed for a much longer period than usual, by preventing the animals from being subjected to that depression of temperature, which at the end of the warm season, ordinarily seems to check the gemmiparous multiplication, and to call into exercise the true sexual operation. (See "Burmeister's Entomology," translated by Shuckard, page 310.) Thus notwithstanding the great increase in the number of independent beings, not one of the viviparous larvæ becomes a complete organism; for so long as this method of multiplication is continuing, the type of the perfect insect is never evolved, and no true sexual characters make their appearance. (Note.—The viviparous larvæ are usually spoken of as 'females,' but they have no more real title to this designation, than is possessed by a *Hydra* which is budding off new Polypes from its body.") I trust that these extracts will not infringe too much on your space in "The Naturalist."—JOHN L. WIGHT, 1, Percy Place, Clapham Road, London, September 20th., 1854.

Proceedings of Societies.

Scarborough Philosophical and Archæological Society, June, 1854.—The following paper was read by R. B. COOKE, ESQ., (Honorary Secretary):--

Observations on the Temperature of the Sea, and its Relation to the Climate of Scarborough. --The importance of ascertaining the temperature of the sea at different periods and under different conditions has been recognised by Humboldt, Sabine, Fitzroy, and others. Observations with this object have been made by members of Government surveys and other scientific bodies, and also with the intention of determining the existence and direction of oceanic currents, and their influence in producing or modifying climatal peculiarities. Mr. Whitley, of Truro, has paid great attention to this subject, and his observations are embodied in a very able prize essay, published in the Journal of the Royal Agricultural Society of England, vol. xi. I may also allude to the remarks of Professor Dové in his paper on the Distribution of Heat, read at the last meeting of the British Association.

With reference, however, more particularly to our own county, which has a coast line of upwards of eighty miles in length, washed by the German Ocean, Professor Phillips, in his recently-published work on "The Rivers, Mountains, and Sea Coast of Yorkshire," observes that "the temperature of the sea is another of the desiderata in treating of the climate of Yorkshire, on which scarcely any data exist." With a view of supplying the desideratum here mentioned, a series of observations were made during the year 1853, the results of which were tabulated for convenient reference, and published in the Annual Report of the Scarborough Philosophical and Archæological Society, (p. p. 17, 18.) These observations, continued up to the present time, were made with great accuracy by Mr. Roberts, the Curator of the Scarborough Museum, and the locality selected for making them was at the extremity of the outer pier of the harbour. It may here be remarked that the sea at Scarborough is well adapted for such observations, inasmuch as it is wholly uninfluenced by the ingress of water from inland sources.

The mode followed in taking the temperature of the sea at the place mentioned, was as follows:—a good thermometer, the bulb of which was inserted into a wide-mouthed glass vessel, was suspended from a fishing-rod, and sunk into the water to the depth of six feet, and allowed to remain there for a few minutes; on its removal the degree indicated was accurately recorded. While alluding to the instrument employed, I may avail myself of this opportunity of congratulating the Society on having recently obtained a set of trustworthy instruments, tested and approved by Mr. Glaisher, and compared with standard ones used at the Royal Observatory. The thermometer and hygrometer employed by the Scarborough Society were manufactured by Messrs. Negretti and Zambra, and are similar to those supplied to the Arctic Expedition sent out under the command of Sir E. Belcher, in 1852. The barometer was manufactured by Barrow, and is of the same kind as that employed by the Board of Ordnance and the Hon. the East India Company, and also by the Meteorological Society.

Whatever therefore can be done, so far as regards the procuring reliable instruments for meteorological observations, the Society has done; and it is satisfactory to know that when carefully used, as in the instance to which I am now about to refer, accurate data may be obtained upon a subject so intimately affecting not only the different operations of agriculture, navigation, and engineering, but particularly the health and comfort of ourselves and our families. It is impossible even to imagine that at the present time any intelligent or well-educated person can doubt the connection existing between climate and the health or sickness of a locality. From a very early period—for the writings of Hippocrates abound with references to the influence of climate, air, etc.—it has been known to exercise a power over disease, either in modifying or augmenting its character generally, or certain of its more manifest symptoms. Nor has its influence in more recent times been overlooked: the writings of Sir James Clark, Sir Henry Holland, Dr. Martin, (Ventnor, Isle of Wight,) and Dr. Davy, with a host of others, have drawn both public as well as professional attention to the influence of climate on health and disease. In referring, however, to these authorities, the invaluable Reports of the Registrar General must not be forgotten, which point out a closer connection between meteorological and nosological phenomena than is generally apprehended. These reports present a body of valuable matter, well worthy the studious attention of every skilled and philosophical practitioner in physic or surgery. The animal and vegetable kingdom suffer together, and in proof of this statement, I may refer to the existence of certain epidemics at the same period that the potatoe disease was prevailing.

But to return; *The Temperature of the Sea at Scarborough*, compared with that of the atmosphere at the same place, is set forth in the following

TABLE.

1853.	Number of Observations	Temperature of Air.	General Mean of Monthly Temperature of Air.	Monthly Temperature of Sea.	Difference of Sea and Mean Monthly Temp. of Air.
		Deg.	Deg.	Deg.	Deg.
April	4	43	45.4	42.25	3.15—
May	14	50	51.2	50.0	1.20—
June	11	60	57.4	53.18	4.22—
July	7	63	61.6	55.85	5.75—
August	8	64	59.8	56.75	3.05—
September . . .	7	57	57.2	55.14	2.06—
October . . .	9	53	50.4	52.0	1.60†
November . . .	6	46	45.6	48.0	2.40†
December . . .	8	38	42.2	43.50	1.30†
1854.					
January	25	37.82	39.4	40.52	1.12†
February . . .	25	39.17	40.6	41.21	0.61†
March	15	45.80	41.2	42.76	1.56†
Whole Year . .	139	49.73	49.3	48.43	

The General Mean of the Monthly Temperature of the Atmosphere is deduced from an average of five years, namely from 1849 to 1853, inclusive:—

MONTHS.	1849.	1850.	1851.	1852.	1853.	AVERAGE.
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January . . .	40	36	41	38	42	39.4
February	42	42	42	41	36	40.6
Mareh	42	43	42	41	38	41.2
April	43	46	48	45	43	45.4
May	51	48	55	52	50	51.2
June	54	59	57	57	60	57.4
July	60	60	60	65	63	61.6
August	57	61	62	55	64	59.8
September . . .	57	57	57	58	57	57.2
October	48	49	52	50	53	50.4
November . . .	47	46	42	47	46	45.6
December . . .	42	43	41	47	38	42.2

On May 31st., June 16th., August 19th., 1853, the sea attained its maximum temperature, when it reached 59 deg. Far., and January 2nd. and 3rd. it was at its minimum temperature, namely, 38 deg. Far., or 6 deg. only above freezing point. The maximum monthly mean, 56 deg. 75 min., occurred in the month of August; the minimum, 40 deg. 52 min., occurred in January. The *greatest* difference between the temperature of the sea, and the general mean monthly temperature of the atmosphere, occurred in July, when that of the sea was 5 deg. 75 min. below that of the atmosphere. In 1853, the difference was probably greater than the average. The *smallest* difference occurred in February, when the sea was warmer than the air by 0 deg. 61 min.

The temperature of the sea during the six months of the year, namely from October to March inclusive, exceeded that of the atmosphere, the prevailing winds during that period being westerly. During the months of April and May, when this amount of funded heat has been entirely given out, and the prevailing winds are easterly, the cooling influence of the sea breezes is felt very keenly. These winds, blowing over the great northern plain of Germany, are rendered still colder by the small quantity of warmth they may contain, being abstracted by the surface of the water. The sea is the warmest, as all bathers are practically aware, though still colder than the surrounding air, during the months of July, August, and September, and it is then also, that the refreshing coolness of the sea-side is most eagerly sought. In October, however, a change takes place, the sea being warmer than the air by more than 2 deg., and an excess of temperature is maintained throughout the winter months. Thus the warmth absorbed by the sea during the hotter months is slowly given up during the colder months of the year, rendering the climate of the sea-coast warmer, milder, and more equable than that of inland localities. A striking illustration of this fact occurred in the month of January of the present year. On the night of the 2nd. and 3rd., a thermometer in the air at York sank to 3½ deg. below zero; at Hackness to more than 2 deg. below zero; whilst the minimum temperature observed at Scarborough was 20 deg. F., which shows a difference of nearly 24 deg. F. between York and Scarborough, and a difference of 22 deg. of warmth between Hackness and Scarborough, mainly due to the proximity of the latter to the sea. I may here draw attention to the temperature of fresh-water springs in the neighbourhood of Scarborough, as indicative of its mean annual temperature. Cayton Spring for instance, from which Scarborough derives its supply of water, has a uniform temperature of 49 deg. F., as it issues from the rock about seventy-five feet above high-water mark. During the severe weather of the past winter, a thermometer held in the air showed the temperature below freezing point, but when plunged into the spring the mercury rose to 49 deg. F.

These remarks are offered as a very humble beginning of inquiries which in time it is hoped will be extended, and upon which I trust at a future period to present to the Society's notice some conclusions which at present are but faintly indicated, and require a further series of observations to be deemed deserving of favourable consideration.

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NOTICES TO CORRESPONDENTS.

Communications have been received up to November 20th., from J. Dalton, Esq.;—G. Donaldson, Esq.;—Mr. G. Fisher.

Contributions have been received, up to November 20th., from J. E. Smith, Esq.;—J. Rose, Esq., M. D.;—S. Stone, Esq.;—L. Shields, Esq.;—G. Stockley, Esq.;—J. M'Intosh, Esq.;—J. H. Davies, Esq.;—O. S. Round, Esq.;—J. F. Whiteares, Esq.;—T. P. F.;—J. E. Daniel, Esq.;—H. Buckley, Esq.;—F. B. Cuming, Esq.;—T. G. Bonney, Esq.;—J. Brown, Esq.:—J. J. Fox, Esq.;—R. Mc'L.;—Mr. E. Parfitt;—C. H. Dashwood, Esq.;—Mr. M. Westcott;—Mr. T. Edward;—G. R. Twinn, Esq.;—J. Gray, Esq.

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THE BIRDS OF STRATHBEG AND ITS NEIGHBOURHOOD, WITH A FEW REMARKS UPON THEIR HABITS, ETC.

BY MR. THOMAS EDWARD.

(Continued from page 247.)

Such being, in a great measure, the *Birds of the Loch during Summer*, with the exceptions already stated, as regards large flocks of Gulls being frequently to be met with, we will now proceed coastwise; but in doing so, we will first note those birds that breed betwixt the Loch and the sea. On the side of the Loch next to the beach, there are ridges composed of rough sand and shingle, beat hard by time, with short grass springing up here and there, and an occasional tuft of bent, called by the people there, "dykes." On these the Ring Dotterel, (*Charadrius hiaticula*,) breeds; as also the Wheatear, (*Saxicola œnanthe.*) Intervening, are long low patches of marshy ground, covered with grass; there the Lapwing, the Redshank, the Dunlin, the Snipe, and the Lark, (*Alauda arvensis*,) all bring forth. On my first visit the nests here were very numerous, but it is not so now; the place having of late years been converted into sheep pasturage, most of the birds have forsaken the spot.

Passing on, we encounter large sandy hillocks, clothed with a rich crop of bent. Along the sides of these amongst the bent, nestles the Rock Pipit, (*Anthus aquaticus*,) the Meadow Pipit, the Yellow Wagtail, (*Motacilla flava*,) the Rose Linnet, (*Linaria cannabina*,) and the Twite, (*L. montana;*) on the top, a solitary pair of Redshanks may be occasionally found incubating; I have met with them several times. Young broods of Partridges, (*Perdix cinerea*,) accompanied by their parents, may also be now and then stumbled upon: I am told too, that the Mallard brings out here, amongst the bent; but I have never yet met with their nests.

We now arrive at a sandy beach, beyond which and stretching far away in the distance, roll the briny waters of the Moray Frith, or perhaps I should rather say here, the broad waves of the German Ocean; there, amongst the bare sand, the fair and lightsome Little Tern, (*Sterna minuta*,) and the Common Tern,* (*S. hirundo*,) both lay their eggs and hatch. Although these birds do not incubate during the day, still they ever keep a strict and faithful watch over the spot; and if an enemy, real or supposed, in the shape of man, Gull, or Crow appears, he is instantly assailed; it may be

* It will be remembered by the readers of "The Naturalist," that there appeared a query from me some time ago, concerning the breeding of the Terns in this quarter. To that query I have received several valuable communications from gentlemen in various parts of the country, consisting chiefly, however, of suggestive hints about the species, etc., none stating exactly anything definite. I am now, however, enabled myself, from further information received on the spot, from the careful examination of specimens, in which I was assisted by a friend, from both places; and from further observation on my own part, during the present summer, to say that the birds are the same; that is, that the Tern that builds the nest on the island, and the one that only makes the slight hollow in the sand wherein to deposit her eggs, is the same

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at first by two or three, but these soon increase, and they keep screaming and darting at, and as long as the, intruder is near. It is curious to see them hovering over you when they have young, with perhaps a sand eel, or it may be some other small fish, dangling in their mouth. It is well worth one's time and trouble, at such a season, to conceal himself at a distance and be an eye-witness to the dexterity and the amazing rapidity with which they will drop down, feed their young, and again re-ascend. It is done so quick at times, that you can hardly tell whether the bird has been down or not, when it is again soaring away aloft. I allude chiefly to the Common Tern: this bird is known by the term of 'Pit-tarrack,' and the Little Tern by that of 'Cleat,' or 'Clet.'

A few pairs of Ring Dotterels also breed here. I would here narrate an anecdote concerning one of these birds, which recently occurred on these sands; hoping that it will not be out of, but just in its proper place, being, as it is, associated with the present article.—Strolling about on the sands in July last with my friend, John Gatherer, Esq., not just exactly, if I remember rightly, with any real or defined object in view, but merely to take what I might call an ornithological survey, and, at least on my part, to pick up or examine any ichthyological or conchological specimen, or such like object which the sea might have cast on shore. We parted, and shortly after I heard the report of my friend's piece, but at what he had fired, I could not then tell from the distance betwixt us. Having rambled up and down, here and there, for some time, I at last found myself approaching the spot where Mr. G. had fired, and was surprised at hearing a low squeaking behind me; but, like the street musician, having my eyes always round me, I soon discovered the chirper lying on the sand in the form of a Ring Dotterel, and apparently very sorely wounded. Ho! ho! thinks I, on seeing it, there is what my friend has fired at, but has lost it. However it is all right yet; I will just pick it up, and give it to him. So saying, or rather thinking, I would put my hand upon it for that purpose; but the poor little thing managed, unexpectedly, to elude me by scrambling away, though with great difficulty, and dragging its broken wing, which furrowed the sand in its course.

I stopped short; it did the same. One of its legs appeared hurt too. Wishing to obtain the bird for my friend, I again made the attempt, but with as little success as before. Again I came to a stand-still, as also did the bird; seeing which, I again started and pounced right upon it, and held

bird—the Common Tern. Of the singularity of the circumstance only, that the same bird should at one time rear a structure whereon to lay her eggs, and at another be content with a mere hollow for the purpose, I of course will say nothing, leaving it to some abler head and mind to deal with the matter, should they think fit; I would say, however, that I have not mentioned this affair as anything new to ornithology, but merely as being so to me. I would also state that I have been informed that a gentleman of the name of Hepburn, who visited the Loch some years since, expressed a similar opinion as I have now done, namely, that the Terns that breed on the Loch, are the same as those that do on the sands, that is, the larger species, not the Little Tern.

it fast in my hand. Yes, I grasped it firmly, but not the bird. O no! it was only a handful of sand; my mouth and eyes too were full; for to make sure work, I had spread myself on all-fours. On rising again, and having cleaned myself of the sand as well as I could, I observed the bird at only about six or seven yards distance, hobbling and tottering about, still inviting me to pursue. I stood a few seconds considering whether I would or not; then off I started, once more determined to have it. Away went the bird, twiddling, and twiddling, and away I followed in hot pursuit; round and round the sand hillocks we scrambled, until I was perfectly wearied, and nothing now but the novelty of the affair, to think that I could not take the little creature, and it so much maimed, could have kept me at it. Sometimes I would have been close up to it, and then again it would have been several yards in advance.

In this way we continued until I saw that I could make nothing of it by fair means, so I doubled round, meeting it fair in front, was about to take hold of it, when, to my amazement, it rose and flew. Its flight, however, was of short duration, as it again suddenly dropped down, and lay on the sand as if dead. "You are mine now at last," said I, as I observed it fall, and was proceeding accordingly to put it into my pocket. But lo and behold! it rose again on my approach and flew, but this time a little farther, when it once more suddenly dropped as before, but behind one of the larger hillocks. It was a beautifully-marked specimen, and fearing that I should loose it now altogether, I determined to put a stop to the Wild Goose-like chase at once. Accordingly, and having put my gun in readiness, I proceeded in the direction where the bird fell, with the intent that if it should rise again it should not go far. Rise it did not. Reached the spot, but there was no bird there. Searched all round, but no—still no bird. The idea now for the first time struck me that all was not right, or at least so far wrong as I had been made to believe. However there was no help now; the bird was off, fairly gone; so I turned to retrace my steps, but not however without first casting another anxious glance all round, but with as little effect.

Met my friend, inquired if he had fired at a Ring Dotterel. "No, he had only shot at a Tern. But, by-the-by," he added, "I found a nest and young of that bird there as I came along." In a few minutes we stood beside the young ones. The spot I found to be only about three yards in advance of where my attention was first drawn by the wounded bird. Having collected the little downy things, being then scattered, and having placed them in a hollow amongst the sand, which Mr. G. had scooped for that purpose, we again took our departure, and in doing so what should we meet with but my old friend, the wounded Dotterel, which again commenced its former pranks, but it was now too late—the truth was out. Drawing my friend's attention to the bird, and having told him how it had already so completly deceived me, he laughed heartily at the affair.

Such was the extraordinary cunning exhibited by the little creature in this

instance, in leading me away from its young, that I must say if I had not seen it myself, it would have been rather a hard matter for any one to have made me believe that such was possible in a bird. The circumstance having been related that same day in the manse of Crimond, by Mr. Gatherer, to a party of gentlemen after dinner, Mr. Boyd remarked, "If it had been one like me, who does not know much about the workings of the lower animals, that had been so fairly deceived, I would not have thought so much of the matter; but to think of an old nester like you, Mr. E., being so completely done, makes the case certainly a very striking and remarkable one."

That I was deceived, I freely confess; not that it detracts anything from me, but only adds another to the already innumerable proofs of the wisdom of the adorable Creator, as displayed in the wondrous works of creation. Nature! Nature! oh, how delightful is thy fascinating embrace. There would I ever hold sweet communion with thee. Oh! how lovely, and yet how terrible; how pleasant, yet how sublime is thy fair countenance to look upon. Would that I could but woo thee more on the waters of the mighty deep, in their hidden and fruitful channels; by the ocean's shore, the meadows green, the shady woods, the marshy hollow, the river's side, by the margin of, and on the reedy lake, on the heathy hill, and snow-capped mountain;—there, either in sunshine or in gloom, in storm or in calm, to behold the mighty wonders of thine hand, the matchless beauty of all thy works, and the perfect harmony and concord which pervades the whole. But, alas! fate has decmed it otherwise, and I must be content, as I am. Brief is the hour, now and then, and from labour stolen; it is all I can give. But we must return.

Numerous Gulls are to be met with here at all seasons, but particularly towards the end of autumn. During winter the flocks are prodigious, consisting of various species, and composed of birds of every grade, from the young of the year up to the adult of many years. As being the most conspicuous and largest, we will first note the Great Black-backed Gull, (*Larus marinus;*) the Lesser Black-backed Gull, (*L. fuscus;*) the Herring Gull, (*L. argentatus,*) numerous; the Common Gull, (*L. canus,*) not rare; the Black-headed Gull, (*L. ridibundus;*) the Kittiwake, (*L. tridactylus;*) the Iceland Gull, (*L. Icelandicus,*) a winter straggler; and last, as being of very rare occurrence, the Ivory Gull, (*L. eburneus.*)

The Common Skua, (*Lestris Skua,*) rare here; the Arctic Skua, (*L. parasiticus,*) and the Richardson's Skua, (*L. Richardsonii,*) are to be met with, the latter being the most frequent. Stragglers of this species will occasionally appear during summer. I have a splendid male specimen of Richardson's Skua in my collection, which was killed there on the 15th. of June, 1850. It was a rare occurrence, and is worthy of special notice.

Leaving Banff on the afternoon of the 14th., for the purpose of obtaining a few Little Tern's eggs, if possible. Had to be at home by next afternoon. The distance was thirty miles. Arrived at Cairness about eleven o'clock, and

not wishing to disturb my friends there at that unseasonable hour, I at once betook myself to the links, that I might be the readier and the nearer the field of operations in the morning, my time being so limited. Crossed the 'cut,' or canal, which runs from the Loch, and having reached the sand hillocks, Nature's couch became my bed, my gun my pillow, and the bare canopy of heaven my covering. The wind, which on my leaving blew pretty strongly, had now increased into a perfect hurricane; but despite the roaring of the storm, and the pelting of the rain, which fell in copious showers, exhausted nature giving way, I closed my eyes in sleep. A little more than an hour, however, had only elapsed, when I was again awoke by the mournful screaming as of some one in distress. Starting like one awaking from some terrible dream, I sprung at once to my feet, but though I strained every eye, could not discover the cause of alarm, or from whence it came. Was it the echo of some shipwrecked or hapless wretch, or cast-away mariner, calling to the lonely shore and the tempestuous and unfeeling billows for succour and for aid? I looked towards the foaming waters, fearing the worst, for it was truly an awful night at sea, and sure enough a stranded vessel lay in sight. I flew in haste to render any little assistance which might be in my power to give. On reaching the wreck, however, I found I had been deceived by the gloom, for instead of a ship, as I thought, it only proved to be a boat, newly, or, but recently cast on shore. Finding it empty, I now turned my attention towards the surge, but could discover no human form, dead or dying. The sound by this time had ceased; I listened in the hope of again hearing it repeated, but, save the hollowing of the northern blast, and the loud moaning of the angry waves, as they lashed and spent their fury on the unoffending shore, all was still; as nothing yet appeared to require my aid, I again sought my lowly couch, where, in my haste, I had left my gun. Proceeding hither, the wail of woe again burst on my ear in spite of the midnight din of the warring elements, and louder than before. I listened again, eager to catch the direction, that I might know where it was. Again it died away. A few paces farther on, and again came the mournful cry, and now I thought I could discern in it the piteous voice of some little infant in agony, and proceeding, not from the beach, but from amongst the bents. Yet a young child out on such a night, in such a place, and tortured by some cold-blooded wretch, perhaps, of a mother. My heart almost died within me, between hope and fear, as I now bent my steps in search of the innocent little sufferer. Wending my way cautiously amongst the benty hillocks, I at last came upon the unfortunate object of my solicitude, being guided to the spot by its agonizing screams; but which, and most happily, I found not to be a child, but a large Hare, securely bound posteriorly by a piece of cord and brass wire, fastened to a stake in the ground. I involuntarily cursed the cruel and heartless wretch whose hand had set the snare, as I cut the poor animal free.'

The first gray streak of morn having by this time tinged the eastern horizon,

instead of again courting slumber, being wet with the rain, I now hied me to the sands, and where I now found that the sea had risen far above its usual mark, and had swept away all the nests that I was in search of. Wandering about bemoaning my sad misluck, my eye rested on a dark-looking object coming sailing steadily along toward me, but diving into the surf now and then. I saw it was a stranger, and prepared accordingly. I staggered, being stiff with cold, to meet him. We neared, and down fell the splendid Skua I have already mentioned. I have seen it stated that these birds do not fish for themselves. If I can believe my own eyes I can affirm that they do. The one alluded to vomited, when newly brought down, a goodly-sized Sand Eel, (*Ammodytes Tobianus*,) which was alive. Besides, the stomach, on dissection, contained two entire small Herrings, (*Clupea harengus*,) which I am sure the bird picked from the water that morning himself.

The Sandwich Tern, (*Sterna Boysii*,) I should say rare—observed a pair this summer. The same may be said of the Cinereous Shearwater, (*Puffinus Cinereus;*) not so of the Fulmar, (*Procellaria glacialis*,) and the little Stormy Petrel, (*Thalassidroma pelagica*,) as they are occasional passers; the Solan Goose, (*Sula bassana*,) also, but more frequent. I remember seeing a large White Gull there in May, 1852, but could not get within shot. What species could it have been? I considered myself at the time that it was either a white variety of the Great Black-backed, or else a pure specimen of the Iceland Gull. Whilst there this season, Mr. G. and I observed a similar bird, but neither of us could get near it. My friend considered it to be *Larus Leucopterus*. The Brindled, (?) (*Uria lacrymans?*) the Common, (*U. troille*,) and the Black Guillemots, (*U. grylle*,) the Razor-bill, (*Alca torda*,) the Little Auk, (*Mergulus alle*,) and the Puffin, (*Fratercula arctica*,) are all met with seawards; the first rarely. Likewise the Long-tailed Duck, (*Harelda glacialis*,) the Black and Velvet Scoters, (*Oidemia nigra*, and *O. fusca*,) as also many other Ducks, etc., already mentioned, as being visitors to the Loch.

The Cormorant, (*Phalocrocorax carbo*,) the Black-throated, (*Colymbus arcticus*,) the Red-throated, (*C. septentrionalis*,) and the Great Northern Diver,* (*C. glacialis*,) are yearly visitors. These birds are likewise occasionally met with on the Loch during winter. Besides the *Grallatores* already mentioned, the Sanderling, (*Arenaria calidris*,) the Knot, (*Tringa canutus*,) the Gray Plover, (*Squatarola cinerea*,) the Turnstone, (*Strepsilas interpres*,) the Seapiet, (*Hæmatopus ostralegus*,) and the Curlew, (*Numenius arquata*,) are all winter birds, and, with the exception of the Gray Plover, have all, at rare intervals, been met with during summer; large numbers of Curlews are often seen during that season. The Red Godwit, (*Limosa rufa*,) is frequently found in autumn; the Black-tailed, (*L. melanura*,) on two occasions. The Curlew Sandpiper,

* A most splendid specimen of this bird, in full breeding dress, was found on the sands of Rattery, this summer. It was skinned by one of the preventive men there, but who could do no more. It has now, however, passed into the hands of Lord Saltoun, who is to have it preserved and mounted.

(*Tringa subarquata*,) once, and the Little Stint, (*T. minuta*,) twice.

These constituting the sea, shore, and Loch birds, we will now take a brief survey of the landward part of the neighbourhood, of course omitting those already noted. There we have the Pheasant, (*Phasianus Colchicus*,) the Quail, (*Coturnix dactylisonans*,) rare; the Ring Dove, (*Columba palumbus*,) the Turtle Dove, (*Turtur migratorius*,) once met with; the Meadow Crake, (*Crex pratensis*,) the Spotted Crake, (*C. porzana*,) twice found; the Cuckoo, (*Cuculus canorus*,) the Nightjar, (*Caprimulgus Europœus*,) rare; as also the Waxwing, (*Bombycilla garrula*,) the Great Spotted Woodpecker, (*Picus major*,) and the Crossbill, (*Loxia curvirostra*.) The Roller, (*Coracias garrula*,) the Bee-eater, (*Merops apiaster*,) and the Hoopoe, (*Upupa epops*,) have all on one or two occasions been obtained. The Goldfinch, (*Carduelis elegans*,) formerly, but I believe not now; the Siskin, (*Fringilla spinus*,) the Bullfinch, (*Pyrrhula vulgaris*,) and the Gray Wagtail, (*Motacilla cinerea*,) rarely. The Chaffinch, (*Fringilla cœlebs*,) the Greenfinch, (*F. chloris*,) and every farm-yard mostly has its Sparrows, (*P. domesticus*.) The Corn Bunting, (*Emberiza miliaria*,) the Yellow Bunting, (*E. flava*,) and the Snow Bunting, (*E. nivalis*;) large flocks of these are often seen during severe winters, and at such times are not unfrequently accompanied by a few Mountain Finches, (*Fringilla montifringilla*.) The Blackbird (*Merula vulgaris*,) the Thrush, (*Turdus musicus*,) the Missel Thrush, (*T. viscivorus*,) rare; and in winter the Fieldfare, (*T. pilaris*,) and the Redwing, (*T. iliacus*,) the Starling, (*Sturnus vulgaris*.)

Alas! here kind reader would I pause a little, and I trust you will bear with me as the tear of sorrow falls, and whilst I relate a sad—sad event, which has just reached my ears, concerning a gentleman whose name is often referred to in the present article, who, though himself not a naturalist, was ever willing and ready to assist any one in that pursuit to the utmost of his power. It was but yesterday, at noon, (August 22nd.,) that my friend the Rev. Mr. Boyd, of Crimond, whilst full of life and strength, and with every prospect of enjoying many, many long days yet to come, being only about forty years of age, left his young and courteous partner and two blooming little ones, to enjoy a short walk with a neighbouring gentleman, intending soon to return. Alas! short was the walk indeed, and, woe is me, never to return. A few paces and he dropped down and almost instantly expired. Alas! another of my best friends gone. Cruel death, if thy hand continue to strip me thus, thou wilt soon, very soon leave me desolate; and then who will take notice of the poor naturalist? Well may the parish of Crimond say, "We have lost that which we may never again find." Well might Mercy weep, and Religion mourn his premature departure, for in him they have both lost a friend on earth; and I, alas! a friend too, and a benefactor.

In the spring of 1850, a pair of Starlings took up their abode near the manse of Crimond, and eventually built amongst the thatch of a low house close by; and at the request of my dear departed friend, alas! the Rev. Mr. B.!

they were left unmolested, and succeeded in rearing two broods that season; next summer, several pairs came, and protection being given them, a still larger number appeared the year following. Many now breed in several places near there, a few pairs annually selecting my late friend's Dove-cote for that purpose. The Rook, (*Corvus frugilegus,*) the Hooded Crow, (*C. cornix,*) the Magpie, (*C. pica,*) and the Jackdaw, (*C. monedula;*) are anything but numerous. The Great Tit, (*Parus major,*) the Blue Tit, (*P. cæruleus,*) the Golderest, (*Regulus cristatus,*) and the Stone and Whin Chats, (*Sylvia rubicola* and *S. rubetra,*) sparingly. The Robin, (*S. rubecula,*) the Nun, or Hedge Sparrow, (*S. modularis,*) and the Wren, (*S. troglodytes,*) are more numerous. The Whitethroat, (*S. cinerea,*) the Willow Wren, (*S. trochilus,*) and the Spotted Flycatcher, (*Muscicapa grisola,*) occur during summer, the latter however, not annually: a single specimen of the Pied Flycatcher, (*M. luctuosa,*) was shot in a small plantation near the manse of Crimand, during the summer of 1849. About a dozen years ago, a single specimen of the Blackcap, (*Sylvia atricapilla,*) a female, was observed to frequent a garden at Crimmonmogate for the greater part of a season.

We now come to the birds of prey, of which great numbers have been from time to time both shot and trapped. Of these the Peregrine Falcon, (*Falco peregrinus,*) stands foremost, then the Goshawk, (*F. palumbarius,*) the Merlin, (*F. æsalon,*) the Sparrow-Hawk, (*Accipiter Fringillarius,*) the Kestrel, (*A. Alaudarius,*) the Buzzard, (*Buteo vulgaris,*) the Rough-legged Buzzard, (*B. lagopus,*) the Kite, (*Milvus regalis,*) and the Hen Harrier, (*Falco cyaneus.*) Of Owls, we have the Tawny, (*Strix stridula,*) the Long-eared, (*S. otus,*) the Short-eared, (*S. brachyotus,*) a winter visitant, and the Barn Owl, (*S. flammea,*) rare: a pretty specimen of the Snowy Owl, (*S. nyctea,*) was found drowned in the Loch, about thirty years ago. Others might be added, but as they are of a dubious character, it is considered better that they should be omitted. But as the last I would mention that a very large bird of prey was trapped at Cairness about twenty-five years since; it was of a tawny colour, feathered to the toes, and was supposed to be an immature specimen of the Golden Eagle, (*Aquila chrysaetos.*) The bird, I believe, was preserved and placed in the house of Cairness; as also were many of the rarer species mentioned here; but on the death of the late Mr. Gordon, they were either removed or left to decay. Numbers likewise finding their way to Banff, when after being stuffed, they were placed in the Museum there, where a few still remain.

But before I finally conclude, however, I would beg leave to state that the foregoing list is not given as a complete one, for there can be little doubt but that there are many which have occurred, but which, from the want of being known to me, are not included here. But if anything like encouragement were given to individuals residing there, as well as in other localities, who may not themselves be lovers of nature, but who might be induced by certain means to look after these things, I have little doubt but that many of the rarer species would be added, not only here, but in

other places also. Naturalists and voluntary collectors cannot be everywhere, and in that case they should have *aids*. We have associations and institutions for the promoting and encouraging of almost everything of a legitimate nature; but where, I would ask, where have we a single society or body for the encouragement or the rewarding of individual, (or otherwise,) enterprise, as regards Natural History? I know of none, and I am sure much good would accrue from such. Why there is nothing of the sort, I of course cannot pretend to say; but surely our naturalists have never thought of the matter, else their willing hearts, liberal minds, and ready hands would have formed such an institution long ago. Let them think of it now, and act accordingly. But perhaps I am speaking foolishly; if so, I beg to be excused; and that the mistakes contained in the foregoing, being errors of judgment and not of will, be forgiven, is the sincere wish of the humble author of the "Birds of Strathbeg."

Banff, August 24th., 1854.

A TRIP TO SELBORNE, IN 1854.

BY O. S. ROUND, ESQ.

THERE are few who have not heard of Selborne, and fewer, who, as lovers of Nature, are not familiar with Gilbert White's history of that, his native place; and many are the tourists, who, in their way through the beautiful valleys of Surrey and Hants, have gone out of their path to visit a spot invested with so much interest. I possess two editions of its history, one by Sir William Jardine, the other by the late Mr. Edward Turner Bennett, who, in the decline of his health, and, as it turned out, of his life, visited and spent some delightful hours in this charming spot; and thus rendered lighter the pressure of cares and sickness upon an exhausted frame and wearied spirit. I had often read his brother's preface to this edition; and when I too have been suffering from ill health, and exhausted spirits, from overtaxed energies in the din of a great city, and the turmoil of business, I have looked with yearning at those pages, and wished for some good genius to plant me suddenly in the midst of those scenes, of which my fancy had raised up such a brilliant image.

During the summer of this year, an old and kind friend proposed a trip to this locality; and when the latter end of August saw me at leisure to take advantage of the proposition, which I need not say I had from the first eagerly embraced, away we went, by open carriage to Rooking station, on the South-western Railway, and by railway to Guildford and Alton, and found ourselves upon the 30th. of that month, within a few miles of the goal of, to me at least, so many anxious aspirations. The day was so hot that we well nigh lost the train; our steed literally could not get on, and Alton lay as still in the sunshine as if its long down-hill street were untenanted. How-

ever, mine host of the Swan soon brought out a one-horse open carriage, and after a delightful drive of some five miles, we came at once upon Selborne.

One is apt to portray in one's mind's eye a vivid picture of what we take a great interest in; and I confess as I approached, most of these visions were dissipated; for I had pictured to myself a wide sweep of undulating pastures, with a ridge of chalk Down surrounding them, and the residence of the historian somewhere near the centre, in the midst of fields and gardens. I will not, however, do his memory the injustice to suppose that his descriptions led to any such conclusion; the only thing that can be said is, that his letters referred to general features chiefly, and when checked on the spot are certainly uncommonly correct, and show an intimate knowledge and long study of the different branches of natural science involved in such a topography as his. Our way lay through stubble fields, and a deep lane, turning to the left from the high road, led us by a short cut to the north end of, rather the *side* of a steep acclivity of great altitude, and most picturesquely clothed with beech trees; this was Selborne Hanger, and forms the foot, northwards, of a series of hills of very much the same character, extending from Selborne to Petersfield, and so on to the Downs towards Portsmouth. It reminded me of Marlow Woods on the Thames, beyond Maidenhead and Cookham, more than anything I had seen. The village lies in a little nook of a very broken character, although the clothing of trees and hedges somewhat obscures these inequalities; the houses are chiefly of the poorer class, with generally an up-stair story, and built of the stone of the county, with a few brick dwellings, forming an irregular kind of street, winding in a most picturesque manner, and running south-east along the base of the Hanger; the soil being a mixture of chalk and stone, of what Gilbert White very properly designates as of a "rubbly character;" in fact little removed above the chalk in hardness, and in appearance not unlike that now used much in England, and brought from Caen, in Normandy, being a free-stone, and very good, it is said, for hearth-stones.

To describe the rents and slips of earth which appear to have taken place at various very distant periods in every direction, would be impossible, but, as might be expected, every turn produces new charms for the artist, and, although I do not profess the art, I understand enough to enjoy the ocular banquet with full zest, and to bring away some slight sketching memorials. We found, for a village inn, excellent accommodation at Mr. Hole's of the Queen's Arms, and after a mutton cutlet dinner, aided by Alton ale and pancakes, we mounted the Hanger, almost as steep as a wall, but having paths executed upon its face, of marvellous ingenuity and convenience; and more particularly one at the southern extremity, aptly called the "Zigzag;" and as from this point, a most magnificent view can be obtained of the country towards Portsmouth, the summit bore marks of many a pic-nic, for which tents are furnished by Mr. Hole.

After a charming ramble, in spite of the heat, we returned and took our

tea, and retired early. I waked with the gray morning, and as it was the height of harvest, every one in the village was astir even then; and the tramp of horses and the grating of waggon wheels soon ushered in the day. I arose shortly after and sauntered into the church-yard and church, which being in a course of repair, was luckily open, and there read with a melancholy interest the mural slab by the altar to the memory of the *Rev.* Gilbert White, most erroneously stated in a late number of the "Leisure Hour," *not* to have been a clergyman, where, not only is there this evidence to the contrary, but an entry in the Register to a marriage and christening, bearing his name, very shortly before his death, (three weeks, I think, only.) The church stands on the verge of a chasm, at least thirty feet in depth, I should think, but unseen from within, by reason of a hedge.

After breakfast, we devoted the forenoon to a walk to "Nore Hill," the next stage of Down and Hanger, where, near the summit, we found sheep browsing on the short grass, or lying in picturesque groups beneath the beeches, through whose stems we obtained delightful glances at the far prospect stretching away for many a mile beneath us. We then turned the hill and I think, although I have seen many views, I never, in the whole course of my experience, beheld such a beautiful prospect as met our eyes; my friend sat down under an umbrella, it being severely hot, and was quite entranced in silent admiration; the variety, the extent, the magnificent sweeps of hill and dale, hanger and chalk down, defy description; and embellished as the landscape was, by the harvest, cut, uncut, and in course of being borne off the fields, a more lovely and at once sublime scene—sublime in the grander features of rural beauty, could not well be imagined.

These Hangers, which form such a charming feature in this sweet scenery, are, as it were, a succession of steps in the country, and bear away to the right in graceful gradations, until they are lost in the gray mist of distance, and so softly does that distance define their swells and outlines, that it seems as though you could put your hand upon them as upon a beautiful model; the eye, when a *little* closed, takes in so much. Laying here for a long time, we retraced our steps till we came upon the open Down, towards the back of the Hanger, forming in fact part of the old forest, which runs along the top and further side of the hill, forming the Hanger, and has all the attributes of a wild chase, interspersed with brakes, furze, heath, and scattered trees, none apparently of very old growth, those probably having been cut from time to time.

We then crossed this hill, whose green sides were enlivened by groups of cattle, and came upon two beautiful seats, commanding, I should imagine, a magnificent prospect; one the residence of — Snow, Esq., the owner of the other I do not remember; this is Newton, or Newton Valance, and if the road be pursued, would lead down the hill from behind, at the Alton or north-west end of the Selborne Hanger; but we contented ourselves with going down another easy descent in the bosom of the Hanger itself, whose

welcome shade after our walk in the sun, the heat of which was intense, was peculiarly refreshing; and this brings me to the whilom residence of the Reverend historian of the village, which, from this point, that is, immediately beneath the Hanger, looks lovely; it is the view of it taken by Mr. Harvey, and engraved in Mr. Bennett's edition. It stands here in a miniature Park, with some fine trees, and verdant sward, and a small piece of water in the centre; but the front, properly so called, faces close upon the village street, and here, I confess, I could have wished that it had not done so; perhaps this was merely because it did not accord with my preconceived idea of the locality, and so let it pass; it has now become the property of Mr. Bell, the well-known dentist, whose professional avocations only permit him to taste the pleasures of this rural retreat once in the seven days, so I did not see more than the exterior, which likewise appears of late to have received a small addition, apparently in offices.

In the course of our ramble, I found a nice specimen of the delicate Fern known as *Cistopteris fragilis*, but as I had no instrument with me fitted for the purpose, I got it up but imperfectly, and it survived my return but a few days; I was, however, more successful in a fine specimen of the Hart's Tongue Fern, (*Scolopendrium vulgare*,) which is now flourishing in my sister's collection, at Sunninghill, and apparently did not miss the moving; I also saw some Club and other Mosses, which we do not ordinarily meet with in any but heavy clays, however there is a tendency to this formation in particular parts of this district. Gilbert White only alludes to the Ferns generally, as *Filices;* indeed, at that time, they were not so much a study as at present. There are two streams which water this sequestered spot, one crossing the path as you enter the village from the north, and the other at the further end; and indeed, I do not know, that the first does not form a portion of the second; but in dry seasons, the water soaks up, so that it becomes exhausted or absorbed before it reaches the lower ground. Now, indeed, the lower one was dry, and then, further, a "well-head," as it is called, flowing out of the hill near the Zigzag, did not run with great volume, though freely.

The soil appeared very productive, and the crops, of wheat chiefly, excellent; some few hop grounds there were, but this year there has been an almost total failure of the crop; and we only saw one lot of vines along the whole vale of Alton with fruit upon them. The village has of late years been enriched with a new Vicarage of white brick, and a handsome house it is. I wandered in the church-yard, and found a sprig of the Yew tree cut off, which I secured as a memento, and a portion of the frontal bone of a skull of some of the inhabitants, whose it would be difficult to say, but it did not appear very ancient. The Plestor is a three-cornered piece of ground partially covered with turf, abutting on the high-road or street, and forming a frontage to the church, which stands just beyond it, and surrounded with houses—one a neat linen-draper's shop. The inhabitants appear to be quite rustic, and owing, I suppose, to the very strong reflection from the white surface

of the land, were, when we visited the place, tanned to the hue of the veritable Red men of the west. From the window of our little sitting-room at the Queen's Arms, we had a charming park-like prospect adown a wooded valley extending eastward, but this we had no opportunity of exploring, as our time ran short, and after an early dinner, and a subscription of our names in the visitors' book, four o'clock saw us again "steaming away" for Guildford. The retrospect of my visit is a very pleasing one, and only furnishes an incentive for one which I trust to take in cooler weather, and with more time on my hands: for the present, my observations, such as they are, have been recorded.

September 21*st*., 1854.

FAREWELL FACTS AND FANCIES FROM NORFOLK.

BY G. R. TWINN, ESQ.

On Tuesday, June 13th., I walked early in our orchard, and was surprised at the sight of three Goldfinches, (*Carduelis elegans,*) and a Blackcap, (*Curruca atricapilla,*) singing on a cherry tree, and occasionally indulging in a little fruit. In the evening I strolled to Melton ruins, and gathered my first Scarlet Pimpernel, (*Anagallis arvensis,*) in the lanes, and also some Wild Strawberries, (*Fragaria vesca,*) quite ripe. A fine cluster of Forget-me-nots, (*Myosotis palustris,*) became our prize as we returned, and a flower of the Red Campion, (*Lychnis dioica.*)

By reference to my calendar, I find May 9th. was my date of collecting the White Campion, one of our most pleasing wild flowers, and not so frequently selected as the favourite spot of a very prolific race of Beetles as the Rose Campion. In regard to the Pimpernel, and many other plants, it is not fully known what constitutes their deep sensibility, for the presence of rain or damp very powerfully affects them; it appears the possession of a highly-organized and sensitive tissue, very closely blended with the general substance of the leaves and petals, and which resembles the nerves in man; but what peculiar aids are subservient to the plants' organization and structure, it will require much practical observation and culture to detect; for the Wood Sorrel, (*Oxalis acetosella,*) that closed in the open air, did also in the confinement of a room when rain threatened; but a Pimpernel, with which I made trial, did not. I am only repeating what is well known—that different treatment ends in different results. I have seen the Forget-me-not, by a high degree of heat, produce very dark purple flowers, some almost black.

To study the peculiar habits or properties of the wild flowers in their native states is fraught with much pleasure, and well repays every close observer of that great volume, which tells, (with its beautiful coloured illustrations,) God's great goodness; and leads us to ask, "are not plants indeed endued with sensation?"

June 14th.—Took my final ramble round our village, and received a fine bunch of the *Asplenium adiantum nigrum*, *A. trichomenes*, and the *Osmunda*, also a root of the Yellow Pimpernel, (*Anagallis flava.*) This was brought from the vale of Ovoca last autumn; but I would remark that in Cossey Park, but a few miles from Norwich, it is a very abundant flower, with the Wood Sorrel.

June 17th.—I quitted Bawburgh Hill, and went to stay a few days in a sweet rural village—Runhall, where I revelled mid a most prolific variety of very sweet wild flowers, that everywhere were studding both lanes and fields, and a fine old wood. I enjoyed this change from my usual engagements; and though I own I am fond of adding to my specimens, yet, on this occasion, not having my press with me, I spared the soft things; and so doing brings me no regret, although I lost several kinds that I really needed. Of Ferns I saw the *Lastræa filix mas*, the *L. Collina*, and the *Polypodium phegopteris*, with the *Scolopendrium vulgare.*

The wild boquet I gathered had among its contents the Marsh Orchis, (*Orchis latifolia*,) the Green-winged Meadow Orchis, (*Orchis morio*,) the Reed Grass, (*Poa aquatica*,) the Borage, (*Borago officinalis*,) the Lady's Finger, (*Anthyllis vulneraria*,) the Grass Vetch, (*Lathyrus Nissolia*,) this, instead of being quite crimson, was a *pure white;* it was growing amid numbers of gay blossoms, and it alone was emblematic of purity; no cause was at all visible, why it should be white as the virgin snow; and I record this as the first white specimen I have seen. The flowering Rush, (*Butomus umbellatus*,) the Feather-foil, (*Hottonia palustris*,) and the Teasel, (*Dipsacus fullonum.*)

From the 17th. to the 22nd., I devoted my time to travelling through the rural districts of Norfolk. I paid an evening visit to the pretty church of Kimberley, where the Lords Woodhouse rest in their tombs; and not only in the porch, but in the church itself, the Swallows were discovered with nests; our steps, intruding on the sacred quiet, disturbed them. What a very beautiful trait is that of domesticity, belonging to the *Hirundinidæ.* While the Window Swallow, (*H. rustica*,) remains with us, it certainly leads us to class it with the

> "Household bird,
> That wears the scarlet stomacher,"

for it not only selects our doorways, and roof-trees, but imitates the Redbreast, and makes God's house its home. It makes friends with man in all places—amid city life as well as rural, and I doubt not, were it anti-migratory, that we could easily tame it. It seems to evince the principle of friendship by its very localities for nesting. I remember in 1849, noting a Swallow's nest near the altar of the Roman Catholic Chapel, (St. Helen's,) Brentwood, and the birds, during mass, flew darting over the worshippers' heads; and while the discourse was given, sat on the rails of the altar, and softly 'twiddled.'

Over one of our windows at Bawburgh, for many years, nearly fifteen, I

have known the Swallow to nest, though often robbed of its home, on completion, by the Sparrows, (*Passer domesticus.*) In 1851, we made such alliance with them, that often the young ones came and sat on the sill of a lower window, where we were busy with our books, and frequently they entered the room, and taking their rapid evolutions for a few minutes, would depart; and after half an hour's absence, return again. On May 27th. of this season the Swallows began their nest in the old place, but lost it by the Sparrows taking it. They had many efforts and plans to secure it, for the poor Swallows, as early as three o'clock in the morning, were at it; and an ejectment absolutely took place on the part of the Sparrows, ere they captured the nest.

The little outcasts thus robbed, were homeless all June 4th., but on the morning of the 6th., we found them in the children's play-house, very assiduously labouring at a new erection; but alas, the inquisitive youngsters, and their noisy and merry seasons of recreation, drove them away; but though thus molested, the birds were not driven to despair, and on the 14th. they entered the open window of a lumber-room over the play-house, and met with nothing to retard their work. Here they were safe; and on the morning of the 22nd., they had a home all secure, and three eggs in it. What a rebuke we may take for our want of perseverance in our duties, and how high in the ennobling qualities that man prides himself in possessing, ranks the poor little Swallow!

Birmingham, September, 1854.

A LIST AND NOTES ON THE FUNGI FOUND IN THE NEIGHBOURHOOD OF EXETER.

BY MR. EDWARD PARFITT.

I PROMISED in my former communications to "The Naturalist," that I would give a list of the plants found wild in the vicinity of Exeter; I will now endeavour to fulfil that promise;—I shall begin with that most interesting branch of the vegetable kingdom, the *Fungi.* I have given a great deal of my leisure time to these interesting plants for the last three years, and have collected and figured up to this time four hundred and eighty-eight species and varieties; and I am sure there are numbers more yet remain to be discovered, particularly the minute species, which are in my opinion the far more interesting of the various forms. Not half the world have the least conception of the beauties which are hid beyond our natural sight, till aided by powerful glasses. Had we eyes so constructed as to reveal the myriads of minute living atoms which swarm in earth and air, our present senses would be completely overpowered; and the formidable looking monsters, which sport about in almost every drop of water, would completely disgust us. I am sorry that I have not been able to apply the microscope to the spores

of the first section of the *Fungi*—the *Pileati*, so much as I ought to have done; but the want of time is my only reason; and a great many of them are so fugacious, that the least breath of air is almost enough to destroy them. Having said thus much, I will begin with my list. The names are those of the English Flora, vol. v., by the Reverend M. J. Berkley.

Agaricus muscarius: this is a rare species about here; I have only been able to find one specimen, and that is a beautiful brownish variety found in Mrs. Mitchell's wood, near Topsham.

A. asper: I met with two or three of this species on Haldon, June 7th, 1853, but have not seen any since. This is a very beautiful and distinct species.

A. procerus: this is of frequent occurrence with us, in fact I may call it common, as I have found it in several places, and tolerably abundant in each.

A. excoriatus: in a field at Matford, and on the lawn at Coaver, but always near elm trees; I have never met with this in the open pastures.

A. cepæstipes: this is common in the hot-house at Coaver, and also in the stoves at Messrs. Veitches' nursery. A very beautiful variety of this species occurred in one of the stoves at Messrs. Veitches, March 28th., 1853. I subjoin a description of it:—Stipes, hollow, tough, inside lined with fine silky fibres, outside nearly smooth; ring, perfect, slightly deflexed; lamellæ, wavy, their margins slightly torn, free, forming a ring round the stem, where it is faintly tinged with reddish brown; gills, pale yellow. Spores, white, tinged with yellow; very numerous. Pileus, thin, very tough so as to bear folding between the fingers, plicate—the plaits, reaching rather more than half way from the margin to the umbo, cream-coloured; the umbo, reddish brown, with a few scattered scales of the same colour reaching a little beyond the umbo, unto the pileus. The contrast of the reddish brown umbo, the cream-coloured pileus, and yellow gills gives this plant a very beautiful appearance. This plant is evidently very nearly allied to *A. clypeolaris;* in fact it appears to be intermediate between *A. cepæstipes* and *A. clypeolaris*, but the ring of the latter species, (so far as my observation goes,) is always nearer the pileus than in the former.

A. clypeolaris: two or three specimens of this occurred in the Orchid house, at Messrs. Veitches, September, 1851.

A. cristatus: only two specimens of this very pretty *Agaric* have been found by me; they were growing on the asparagus beds in the garden at Coaver House, October 1st., 1852.

A. mucidus: one tuft of this species I found on an elm stump near Exeter, in November, 1852.

A. melleus: this is common in this neighbourhood in old hedges, particularly in the barrack lane, and on the Alphington road.

A. multiformis: not common. Two or three, under Scotch firs, amongst nettles, Coaver, October 28th., 1852.

A. personatus: Coaver, amongst old leaves, etc., January 21st., 1854. A

fine and beautiful species, not common with us.

A. nudus: this is a very beautiful and delicately-coloured species. I have only met with it in one place, but there in tolerable plenty, amongst dead beech and Pinus leaves, in a small wood near Exeter, October and November, 1851-52.

A. alutaceus: only two or three of this fine and beautifully-coloured *Agaric* have fallen under my notice; these occurred in Stoke wood, September 25th., 1852. The pileus of a beautiful deep pink, and yellow gills; stipes, pale flesh-coloured, which gives it a very showy appearance.

A. emeticus: rather common in Stoke wood, October, 1852.

A. adustus β elephantinus: some monstrous specimens of this occurred at Coaver, some of them weighing a pound and a half each. Pileus, nine inches in diameter; growing amongst dead beech and other leaves, December 22nd., 1851: not common.

A. zonarius: in Stoke wood, September, 1852.

A. blennius: rather abundant under a large beech at Coaver every year, for these last three years.

A. deliciosus: in Stoke wood, September 23rd., 1853; not common.

A. vellereus: Coaver; not very common.

A. exsuccus: a few of this species occurred by the side of a large wood-rick near Exeter, October 26th., 1852.

A. giganteus: a few of this fine and beautiful *Agaric* I met with in the belt of wood which surrounds the lawn at Coaver House, October 11th., 1851.

A. nebularis: under a *Pinus Libanus* on the lawn, Coaver, October 28th., 1853; rare with us.

Miscellaneous Notices.

Nesting of the Chaffinch, (Fringilla cœlebs.)—Dr. Rennie terms this bird a felt-making one, and very highly eulogizes its skill; and I am sure no one who has any regard for beauty, can look at so ingenious a structure, and not bestow on the bird commendation for its neat edifice. But it appears to me, that many naturalists, in praising this bird, forget that its adaptability and use of materials for outside covering is very wisely exemplified, as well as its skill, in so very artfully weaving the substances into one compact mass. The bird that selects an apple tree, will stud the exterior of its nest to resemble the bark of that tree; and so on with a fir, or any other; hence a great diversity is apparent in the outer appearance or design. In the summer of 1853, Dr. Holmes, of Linton, (while looking over a small volume of nests I had drawn from real specimens,) remarked that his servant, in November, 1852, found an elder tree blown down in their garden, towards the close of that very stormy autumn, and that appended to its side, very closely, and of the very resemblance to the trunk of the tree, was a Chaffinch's nest, which, in the summer, had eluded all notice, though daily they were in the habit of passing by it, and must immediately have seen it, had it been of the common order of nests. The secret of escaping observance arose from the similarity of the materials to the bark and general colour of the tree, so as to produce an exact resemblance, and proves the possession of a wondrous knowledge by the bird, thus to manifest such tact and skill.—George R. Twinn, The Elms, Moseley Road, Birmingham, August 11th., 1854.

A memory from Moseley Pool.—The lanes around Moseley, a village adjoining Birmingham, are not by any means uninteresting; one, known by the name 'Stoney,' I visited a few days since, to discover the treasures, and several old faces, familiar to me in Norfolk, greeted me. The Toad-flax, (*Linaria vulgaris*,) was abundant, and its orange gaping corollas made beauty around; there were many Thistles, (*Cardui*,) with their well-protected leaves, surmounted by many blossoms of lilac; the common Knot Grass, (*Polygonum aviculare*,) and the Betony, (*Betonica officinalis.*) Our final destination, however, was to Moseley Pool, a retired piece of water, amid the fields and trees, where the solitary water-fowl could live in peace, and a student, book in hand, could recline, and feel himself really shut from the world and its bustle. The object which drew us thither was the Royal Fern, (*Osmunda regalis*,) information that this pool was a habitat took us out; but alas! to return unrewarded with that, though we obtained several fine plants of the *Blechnum spicant* and the *Lastræa collina;* the *Brachen* and the *L. Filix-mas*, were very abundant. The beautiful Bell-heath, (*Erica ..... ?*) was making a brilliant display along the hedgerows, while the modest Harebell, (*Campanula rotundifolia*,) and the Ling, (*Calluna vulgaris*,) shared honours with it. While rambling round the Pool, we secured a fine specimen of the Beetle tribe, (*Agonum sexpunctatum.*) The tall Foxglove, (*Digitalis purpurea*,) grew in very great profusion; and with its spotted bells and capsules from former blossoms offered spikes of nearly four feet high. We likewise found by the Pool the Wild Mint, (*Mentha*,) in blossom, and very luxuriant; and near it the little yellow Rock Rose, (*Helianthemum vulgare.*) The banks of 'Stoney' lane were very prolific in grasses, and the Hawkweeds, (*Pilosella*,) were breaking out in numbers. I was quite satisfied with the results of my trip to Moseley Pool; and trust I found something to be thankful for, as reminding me anew of our Great Father's love.

> "Thanks to the human heart by which we live,
> Thanks to its tenderness, its joys, and fears;
> To me the meanest flower that blows, can give
> Thoughts, that do often lie too deep for tears."

—Idem, September 4th., 1854.

Late stay of the Cuckoo, (Cuculus canorus.)—I saw to-day in Mr. Graham's shop, in York, a young male Cuckoo, which had been shot by W. Whytehead, Esq., of York, on the 22nd. instant.—B. R. M., September 26th., 1854.

Departure of Swallows, (Hirundo rustica.)—The bulk of the Swallows took their departure on the 5th. and 6th. of this month; though some remained behind until as late as the 24th. While travelling by railway from York to Hull on the 27th., I saw a large flock of these birds sporting in the air near Selby, about 9 o'clock, A. M., and at New Holland, in Lincolnshire, later in the day, I saw a single bird. They have now quite left this district.—B. R. M., Driffield, September 30th., 1854.

Spring Arrivals in Guernsey.—The Wryneck, April 2nd.; the Chiff-chaff, April 9th.; the Cuckoo, April 14th.; the Swallow, April 26th. The oak trees were in leaf by the 20th. of April. We dug new Potatoes from the open ground, no protection, on the 29th. of April; Strawberries were gathered in the Rectory garden, on the 5th. of May.—H. Wilkinson, St. André, Guernsey, 1854.

Occurrence of the Yellow Wren, or Warbler, (Sylvia sibilatrix,) *near Huntly, Aberdeenshire.*—On entering Huntly from the west on the 7th. of this month, I observed on a hedge which lines that part of the road, a most beautiful specimen of the bird above named. Being at the time only armed with a *rain-piece*—an umbrella—I had no means of procuring it. It is the first I have seen in these northern parts. I had a good view of it, for it was by no means shy.—Thomas Edward, Banff, August 26th., 1854.

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